Lockheed
Missiles & Space Company, Inc
Huntsville Engineering Center

Cummings Research Park
4800 Bradford Drive
Huntsville, AL 35807

Appendix B

FILAMENT WOUND DATA BASE DEVELOPMENT

Revision 1
March 1985

Contract NAS8-35054

Prepared for National Aeronautics and Space Administration
Marshall Space Flight Center, AL 35812

by

R. Scott Sharp
William F. Braddock

(NASA-CR-179070) FILAMENT WOUND DATA BASE DEVELOPMENT, REVISION 1, APPENDIX B (Lockheed Missiles and Space Co.) 970 p
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G3/16 43360

APPROVED C. Donald Andrews

C. Donald Andrews, Manager
Systems Anal. & Sim. Section

FOREWORD

This appendix presents the data Tape 8 data in tabular form. Each page consists of six-component force and moment coefficients as they vary with angle of attack at a specific Mach number and roll angle. The angle-of-attack range is from 0 to 180 deg in 5 deg increments. The six coefficients are normal force (CN), pitching moment (CM, side force (CY), yawing moment (CYM), axial force, (CA), and rolling moment (CR). Each successive page is incremented for roll angle in 45 deg increments fro a roll angle range from 0 to 360 deg. The cycle is then repeated for the next Mach number. The Mach numbers in the data base are 0.4, 0.5, 0.55, 0.6, 0.7, 0.8, 0.9, 0.95, 1.05, 1.1, 1.2, 1.4, 1.96, 2.5, 3.0, and 3.48.

This report is presented in three parts:

Summary Report, LMSC-HREC TR D951500-1
Tabular Data, LMSC-HREC TR D951500-1A
Graphical Data, LMSC-HREC TR D951500-1B

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CONTENTS

	Mach Number	Page
Normal Force (CN)	0.4	B-1
	0.5	B-10
	0.55	B-19
	0.6	B-28
	0.7	B-37
	0.8	B-46
	0.9	B-55
	0.95	B-64
	1.05	B-73
	1.1	B-82
	1.2	B-91
	1.4	B-100
	1.96	B-109
	2.5	B-118
	3.0	B-127
	3.48	B-136
Pitching Moment (CM)	0.4	B-145
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	0.55	B-163
	0.6	B-172
	0.7	B-181
	0.8	B-190
	0.9	B-199
	0.95	B-208
	1.05	B-217
	1.1	B-226
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	1.4	B-244
	1.96	B-253
	2.5	B-262
	3.0	B-271
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Side Force (CY)	0.4	B-289
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	0.8	B-334
	0.9	B-343
	0.95	B-352
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	1.2	B-379
	1.4	B-388
	1.96	B-397
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	3.0	B-415
	3.48	B-424
Yawing Moment (CYM)	0.4	B-433
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	0.7	B-469
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	0.9	B-487
	0.95	B-496
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	1.1	B-514
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	1.4	B-532
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	3.0	B-559
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Axial Force (CA)	0.4	B-577
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	0.9	B-631
	0.95	B-640
	1.05	B-649
	1.1	B-658
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	1.4	B-676
	1.96	B-685
	2.5	B-694
	3.0	B-703
	3.48	B-712

Rolling Moment (CR)	0.4	B-721
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	0.7	B-757
	0.8	B-766
	0.9	B-775
	0.95	B-784
	1.05	B-793
	1.1	B-802
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	1.4	B-820
	1.96	B-829
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	3.0	B-847
	3.48	B-856

NORMAL FORCE (CN)

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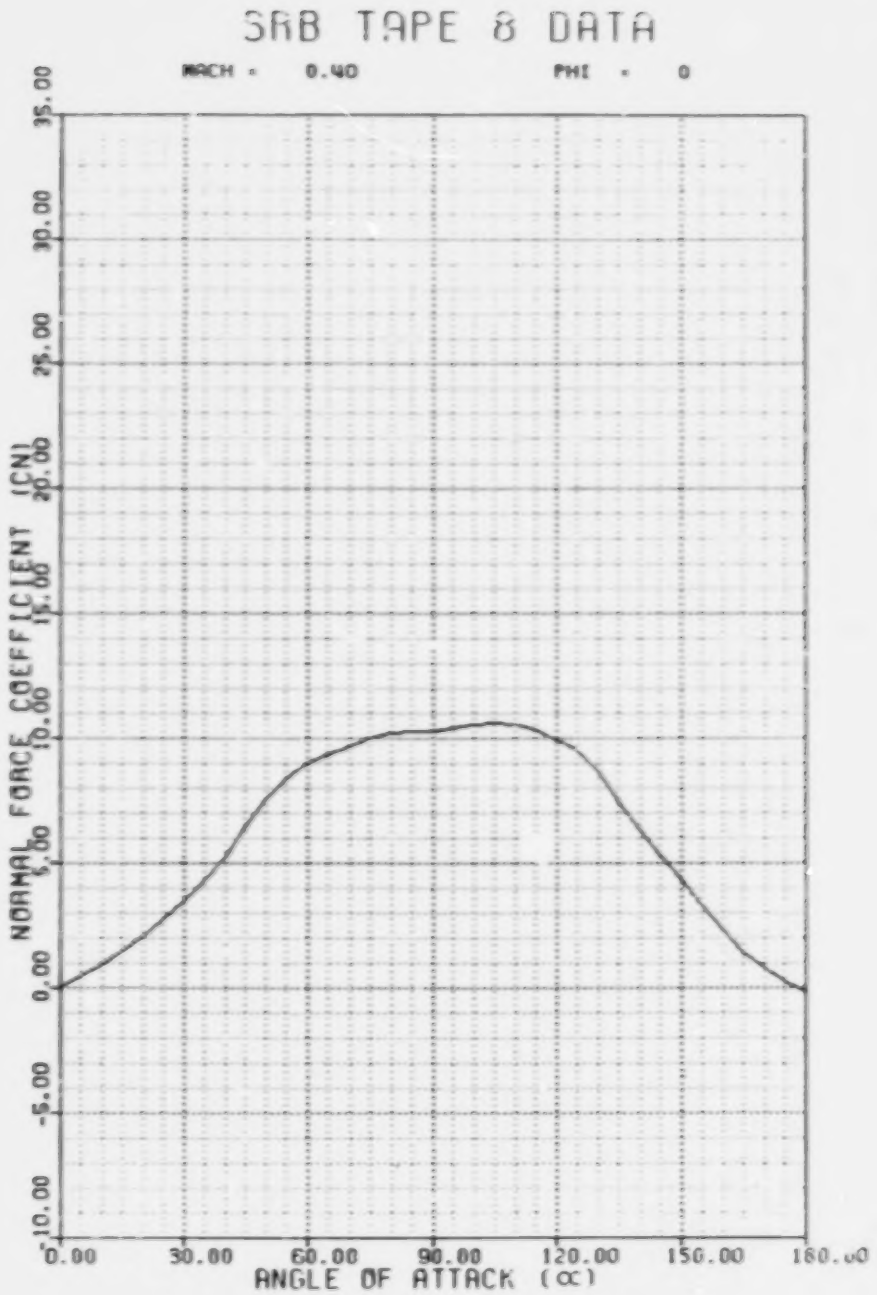

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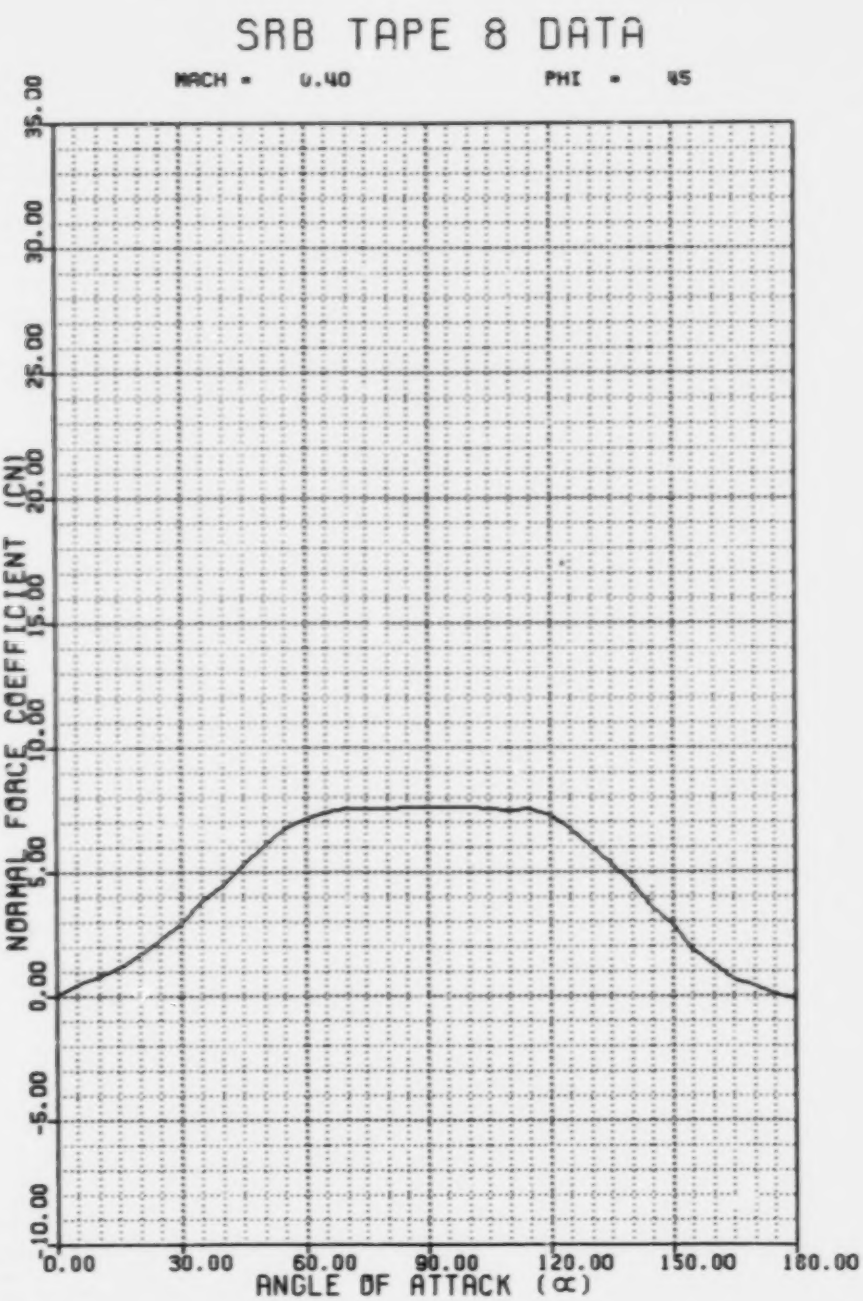

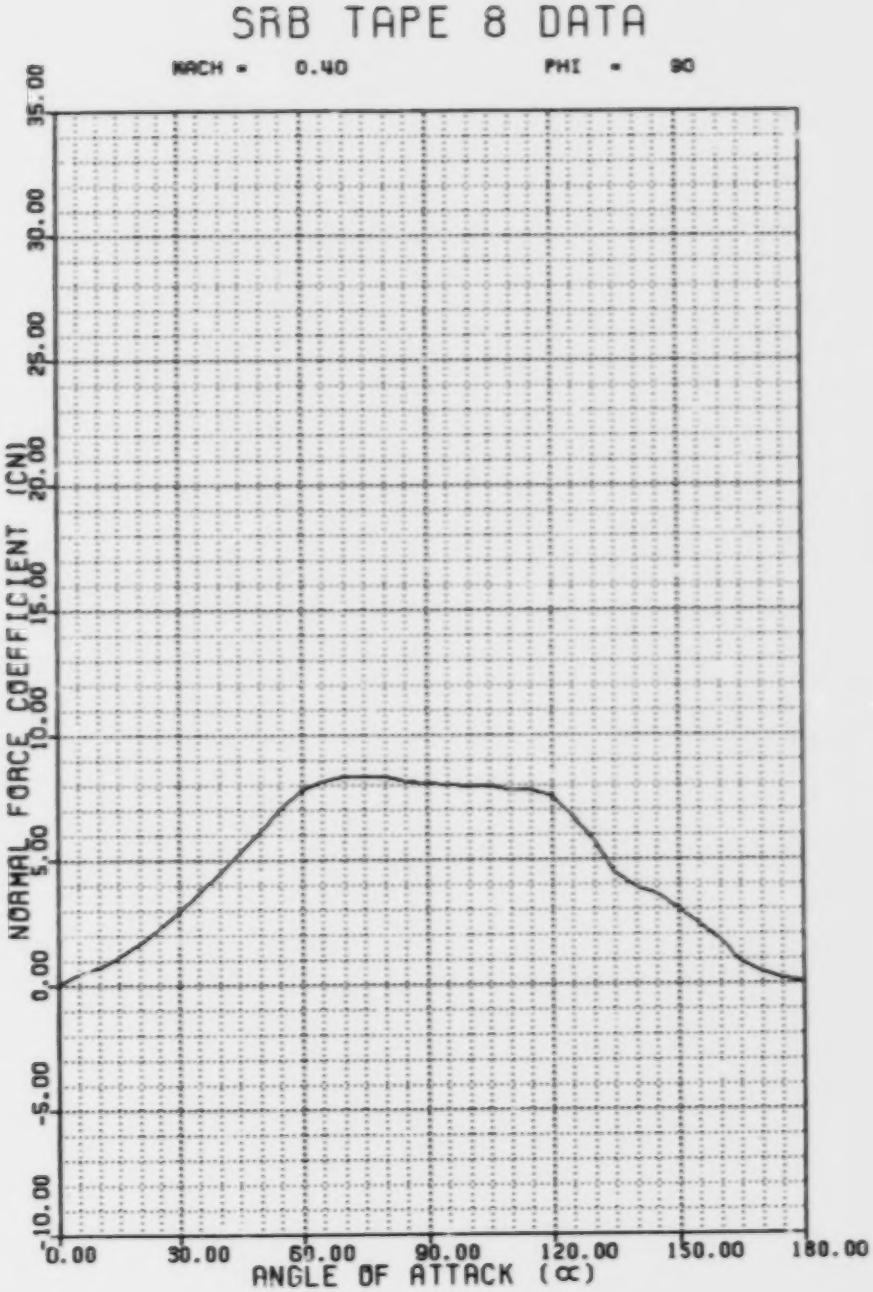
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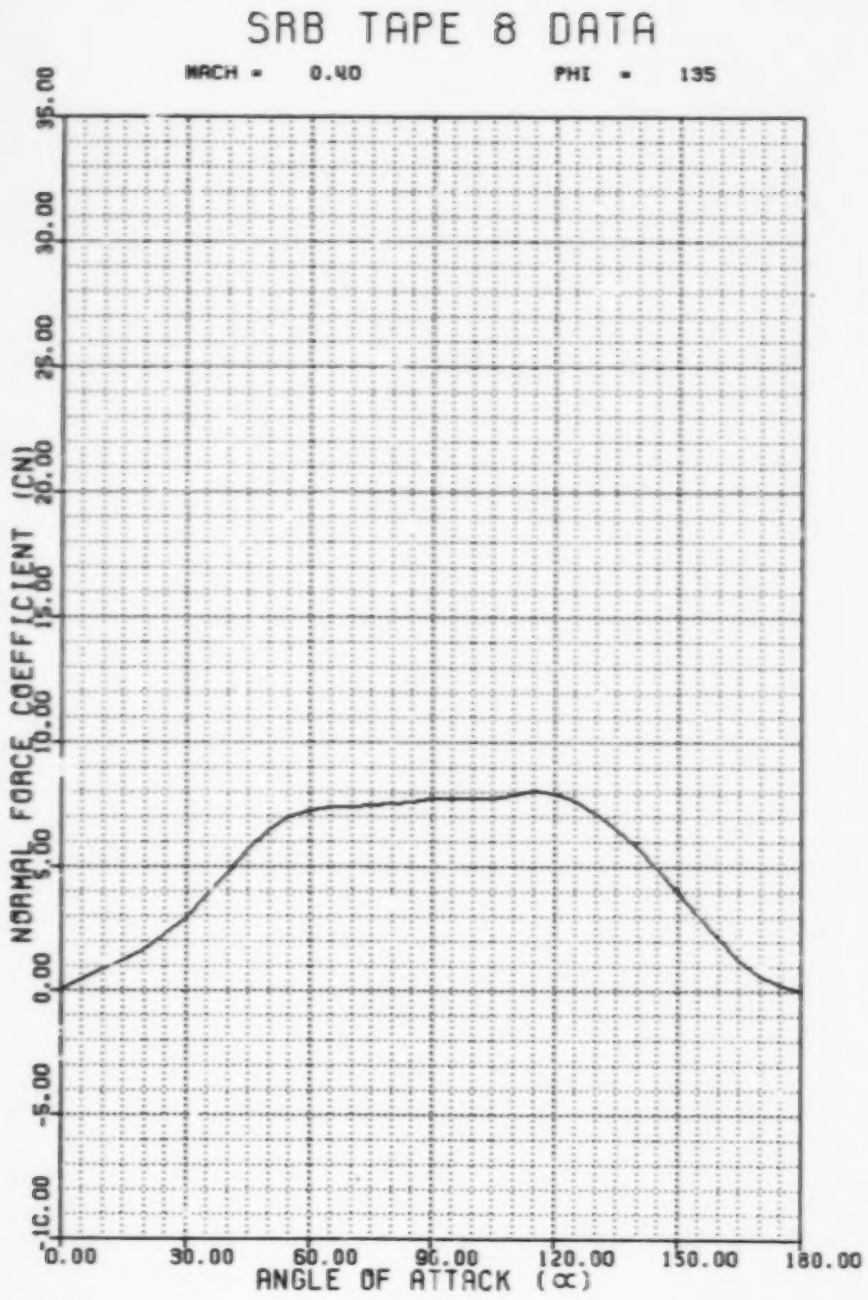
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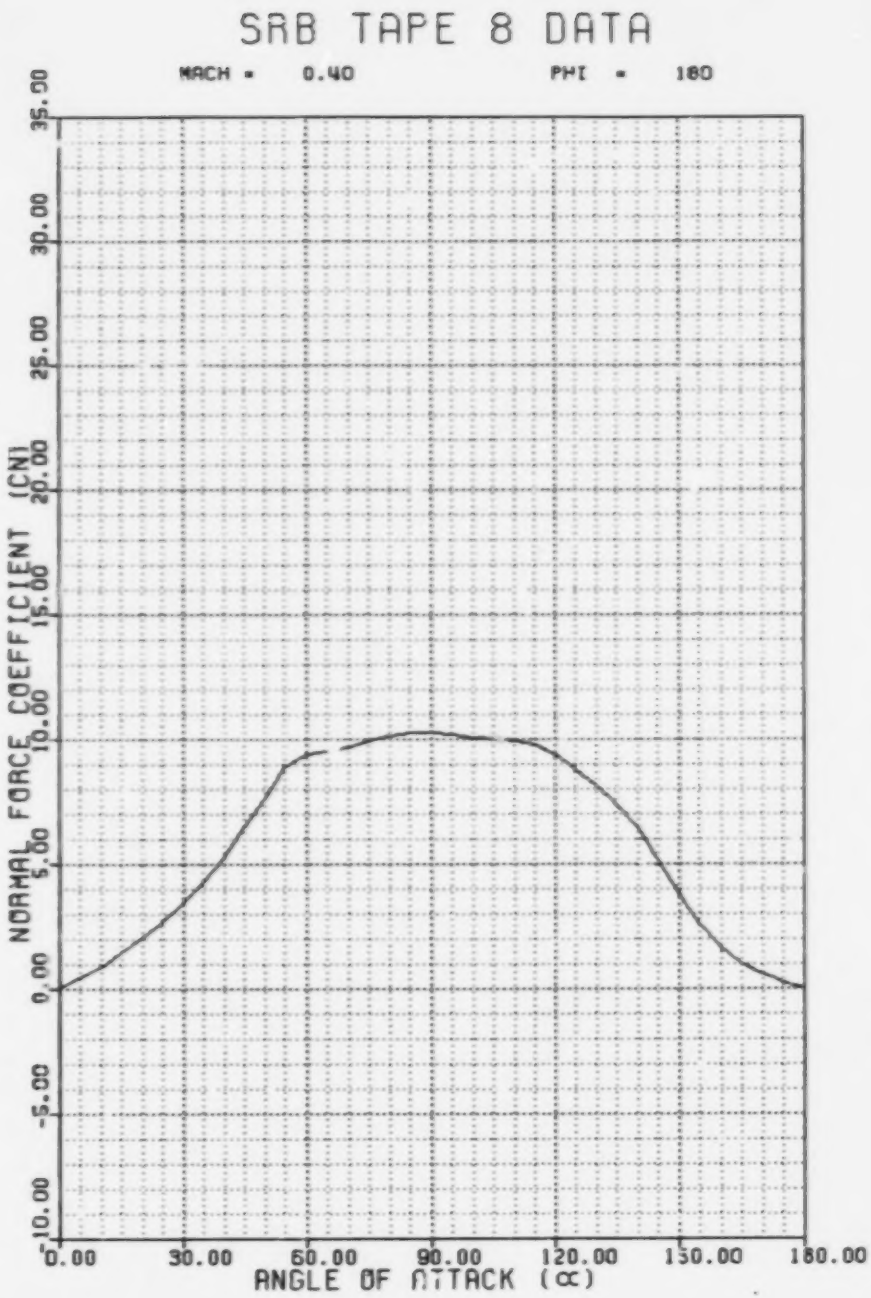
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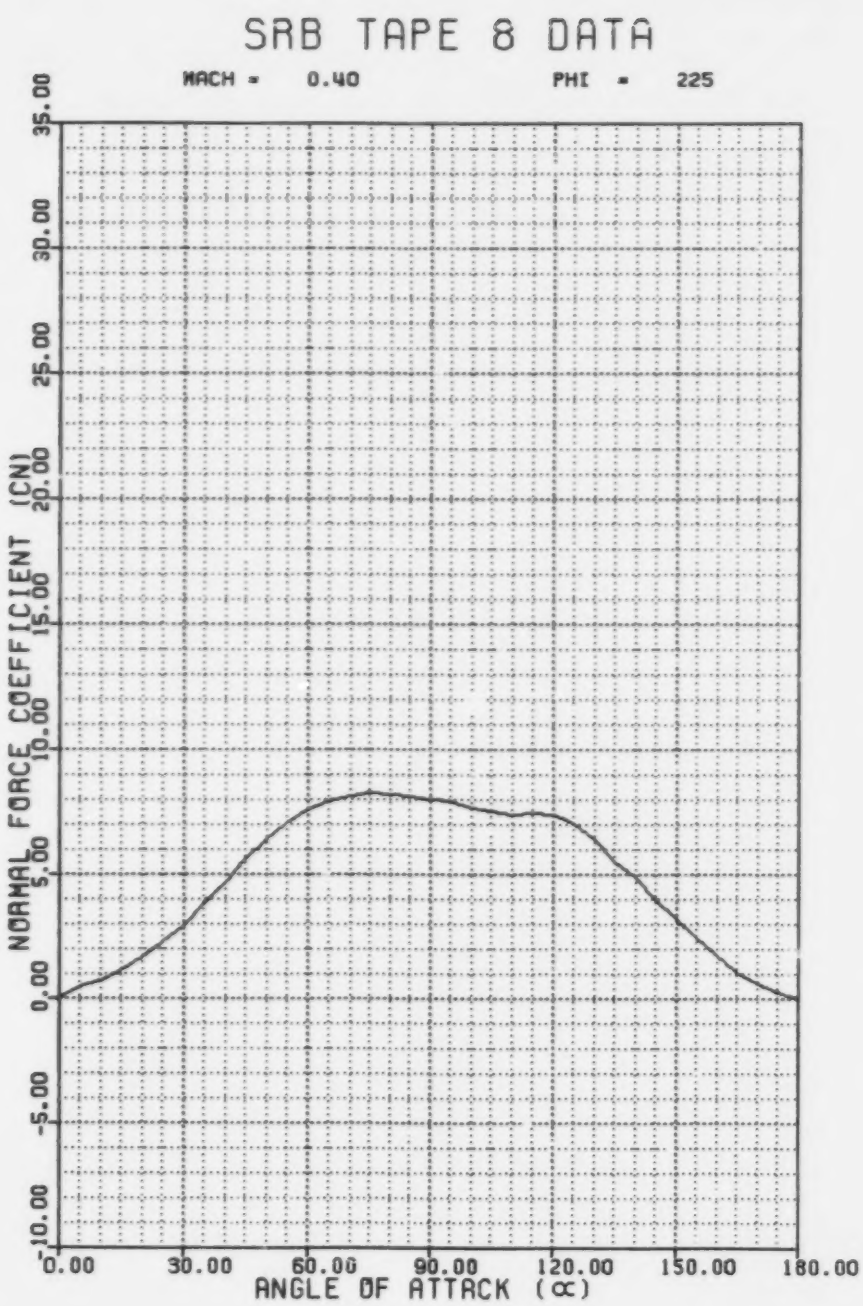
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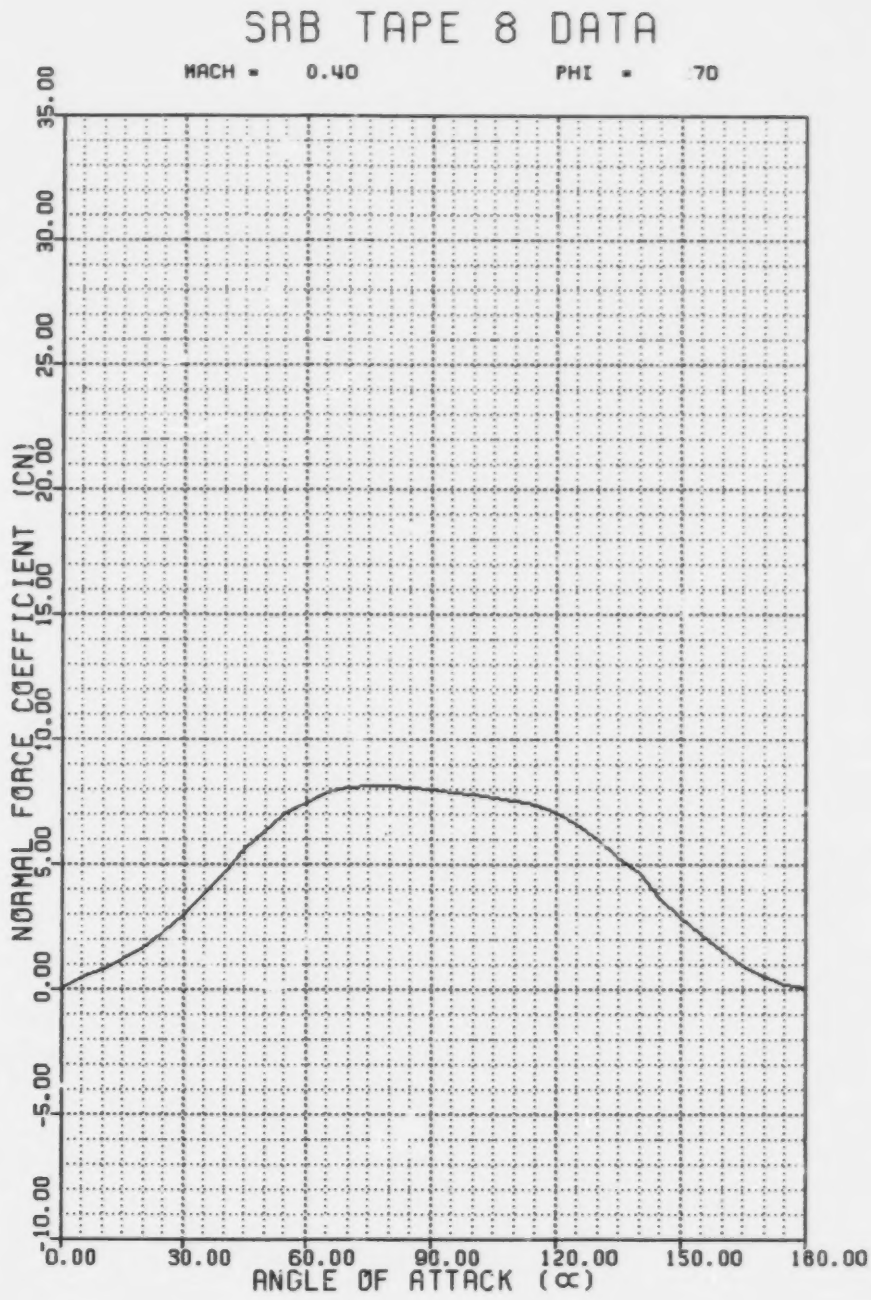
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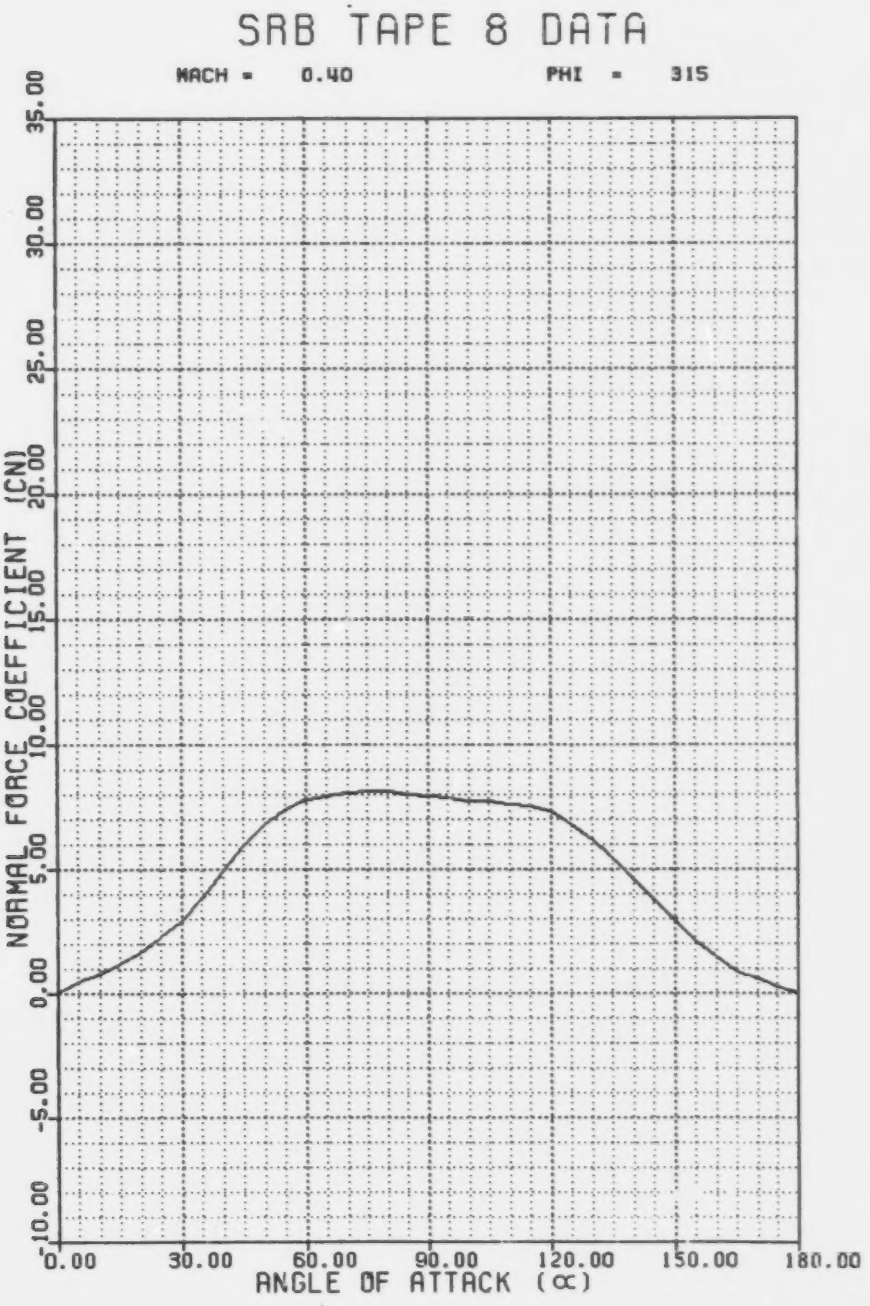
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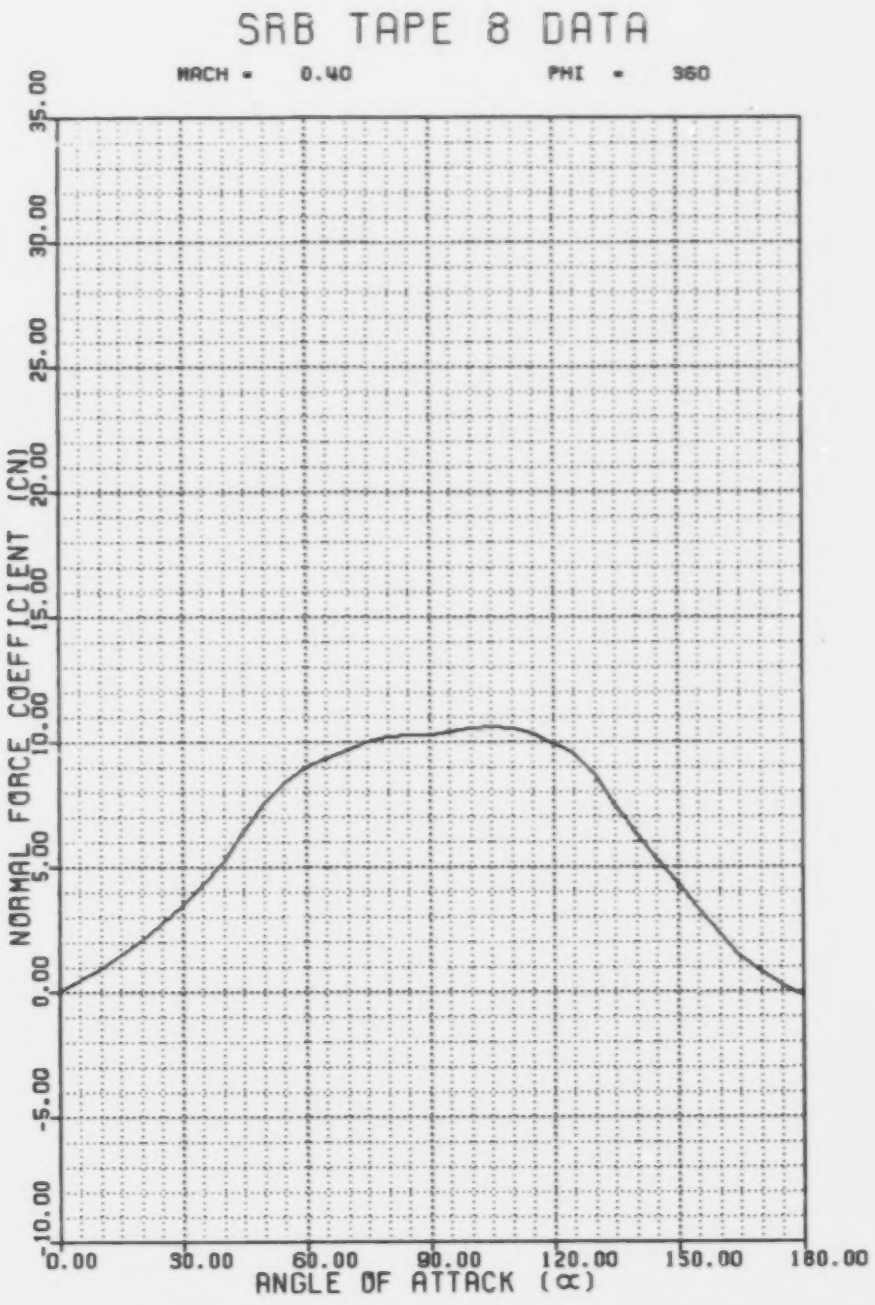
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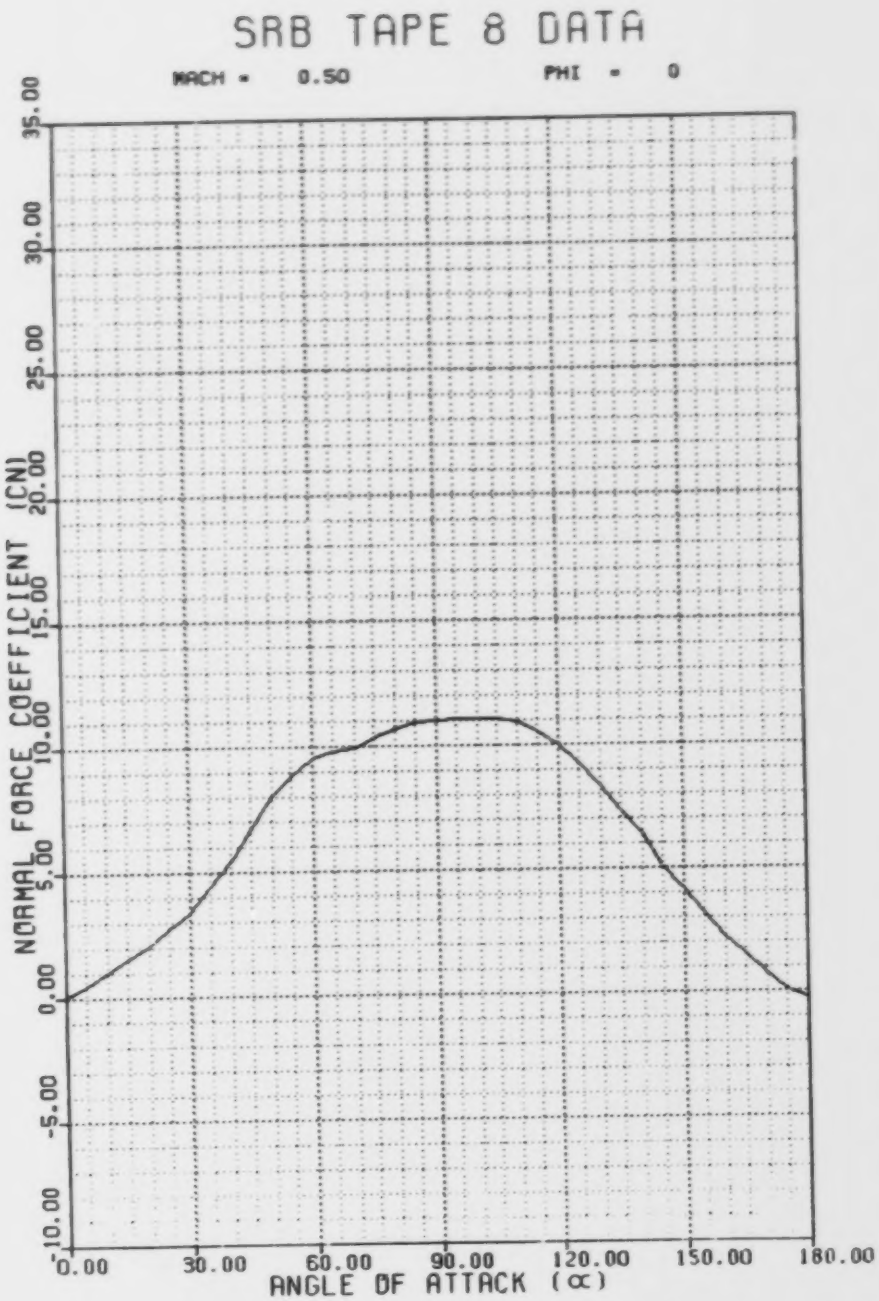
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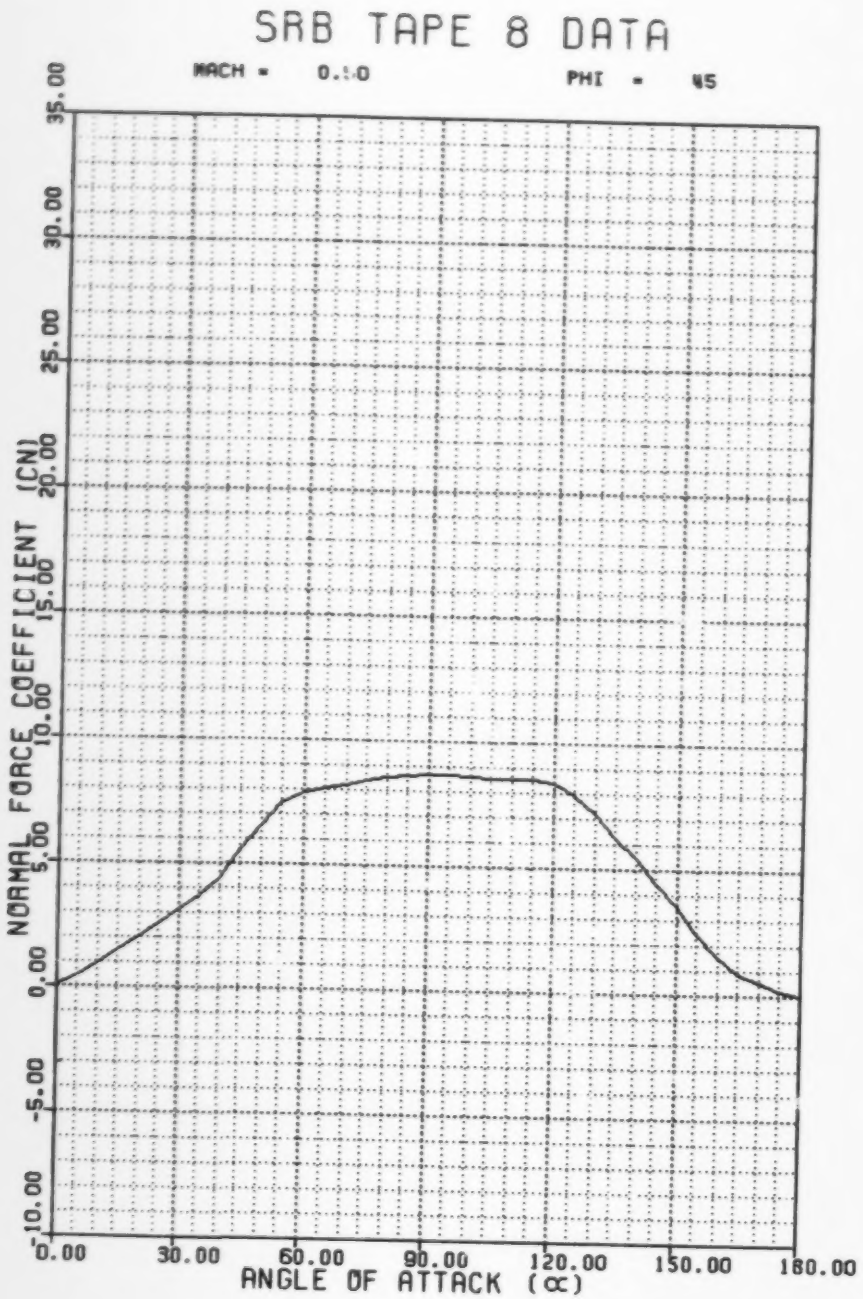
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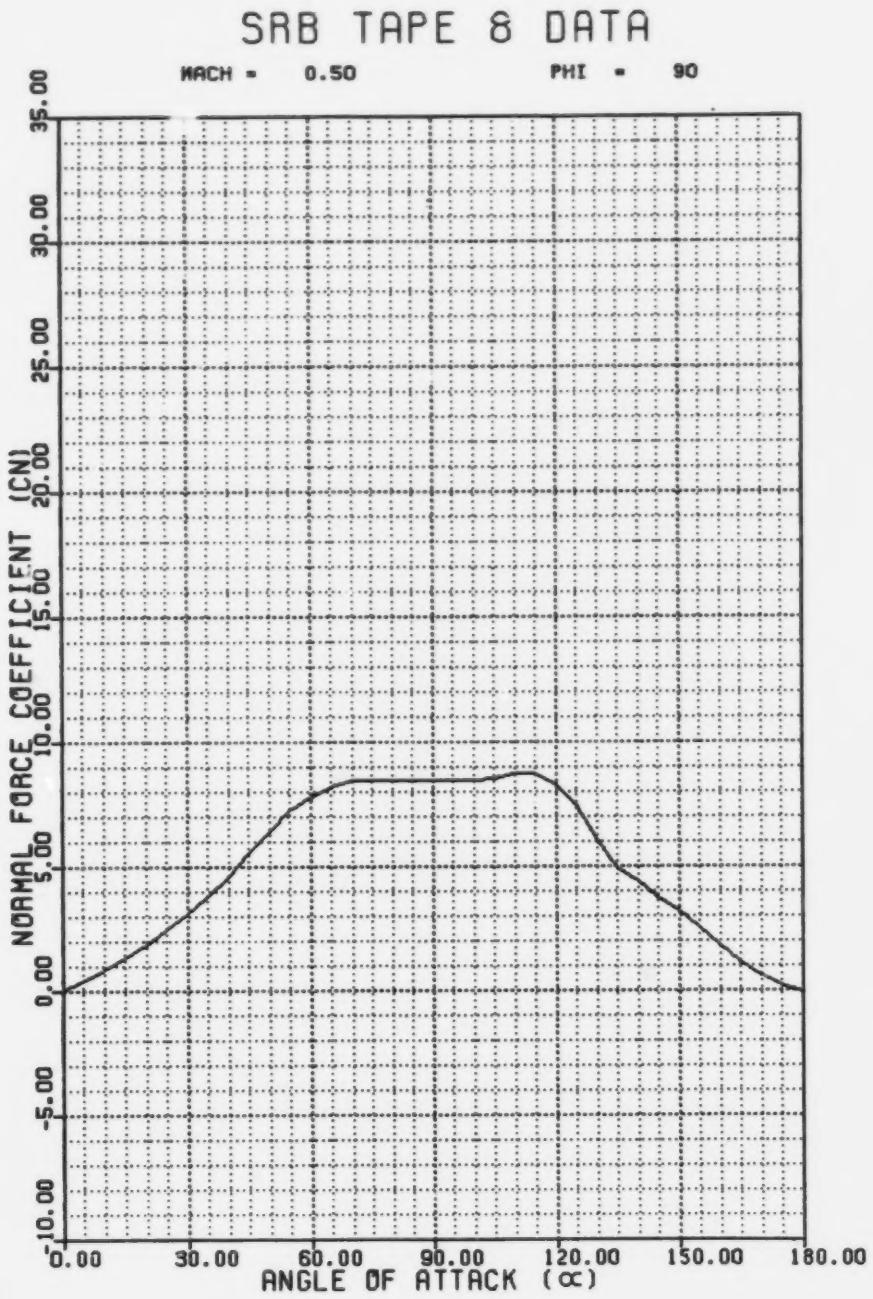
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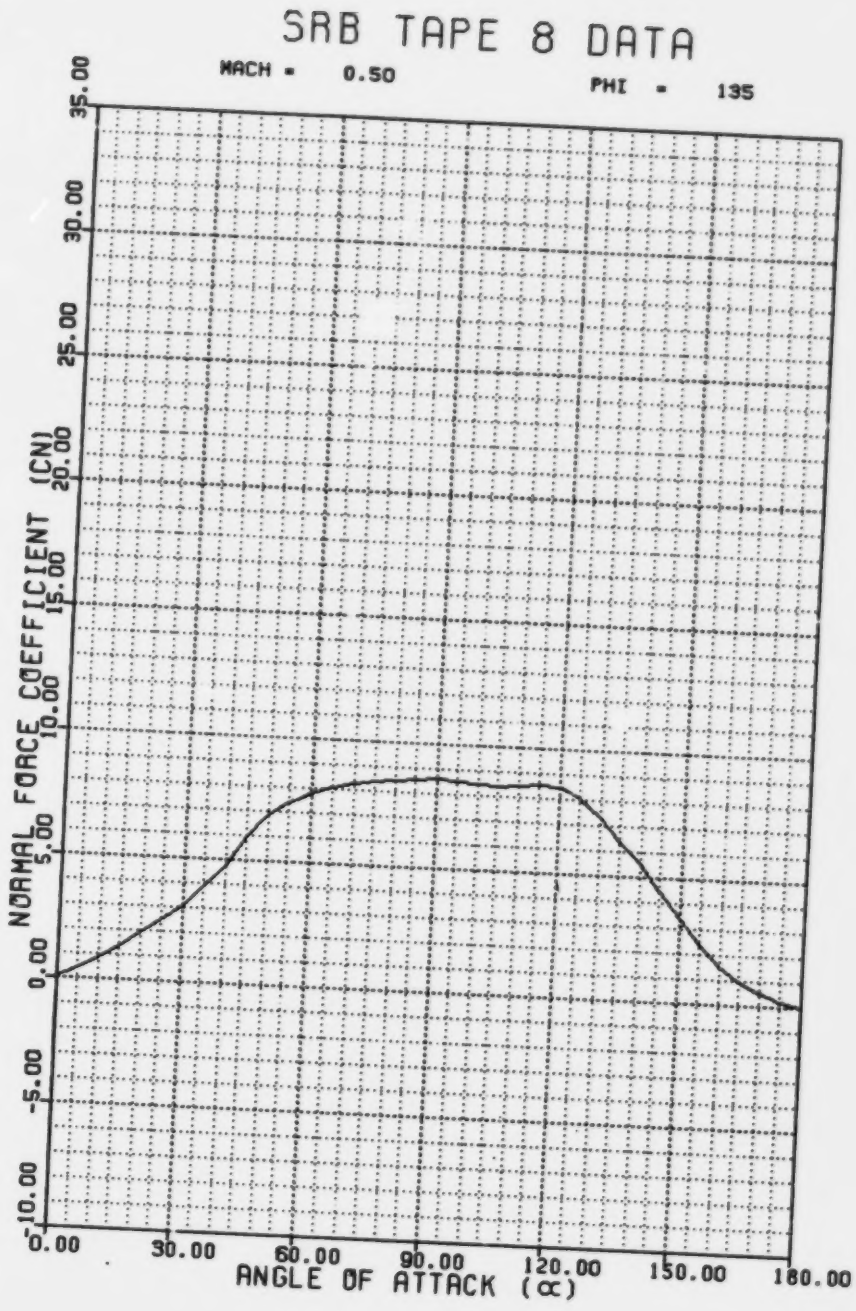
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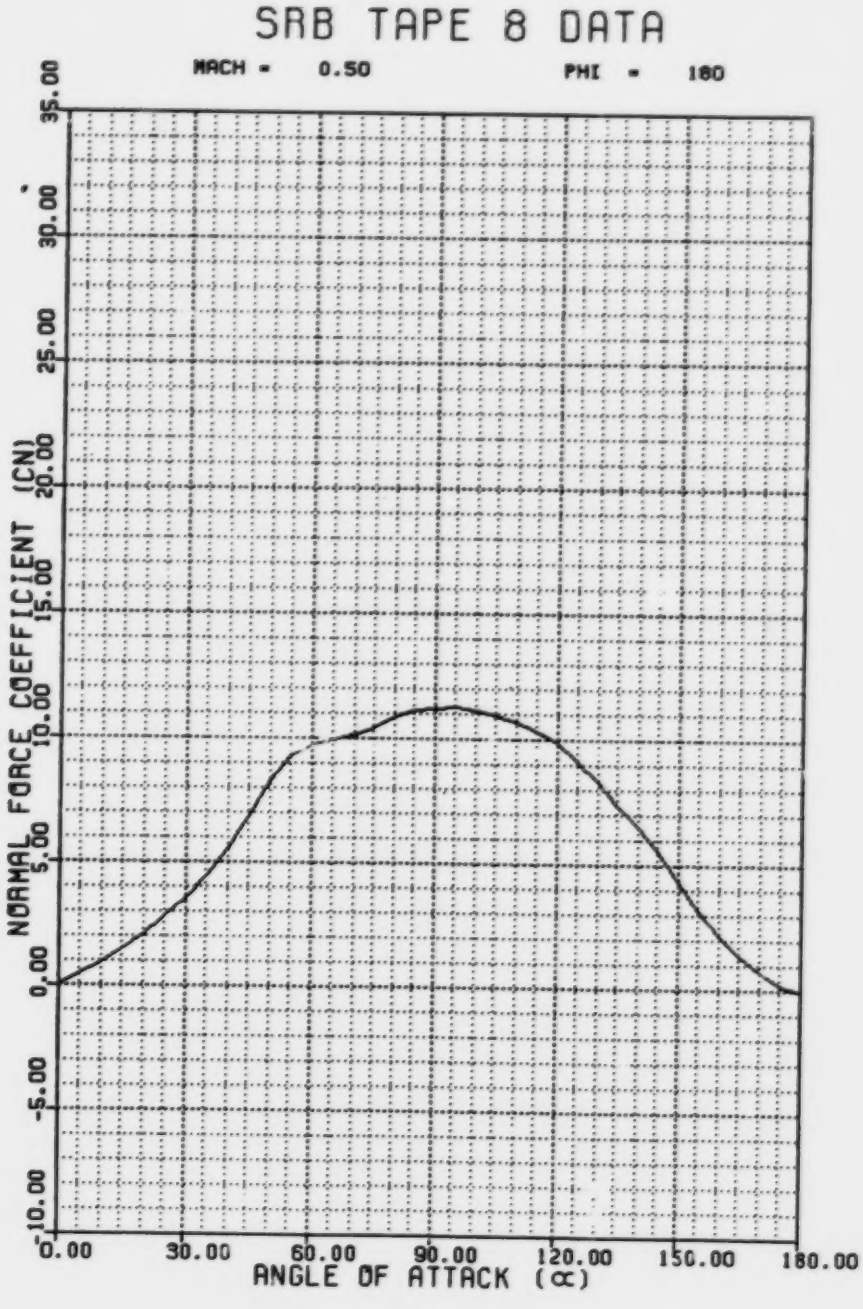
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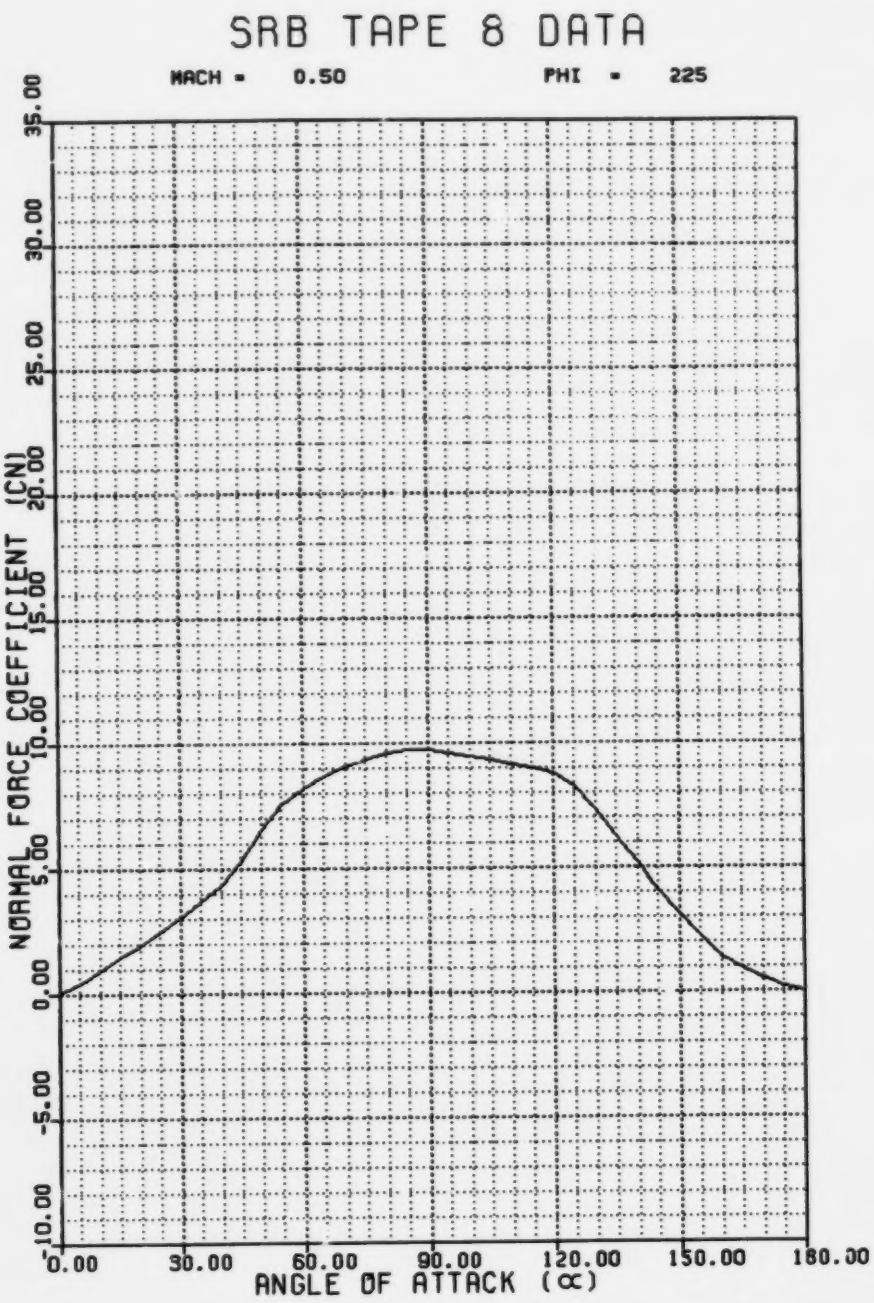
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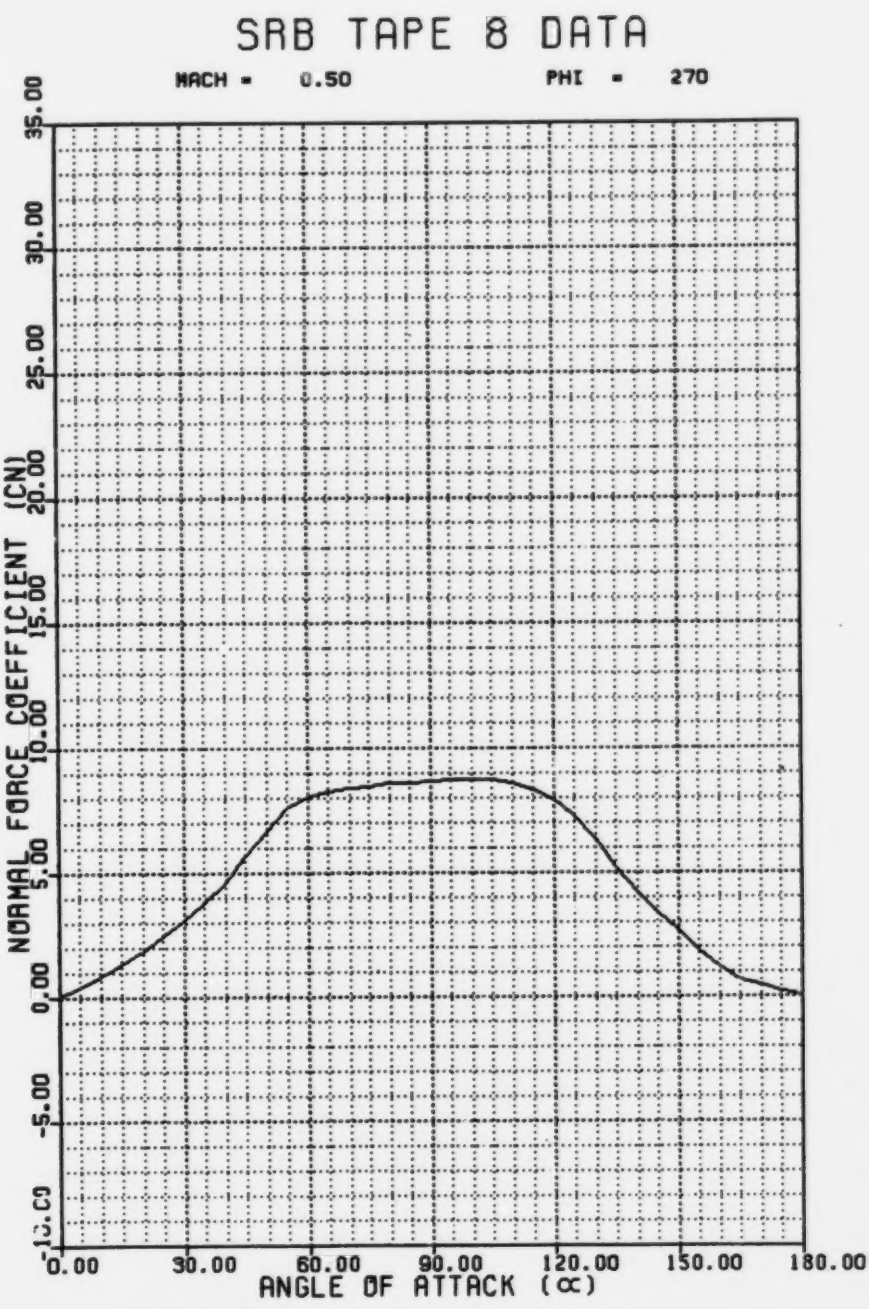
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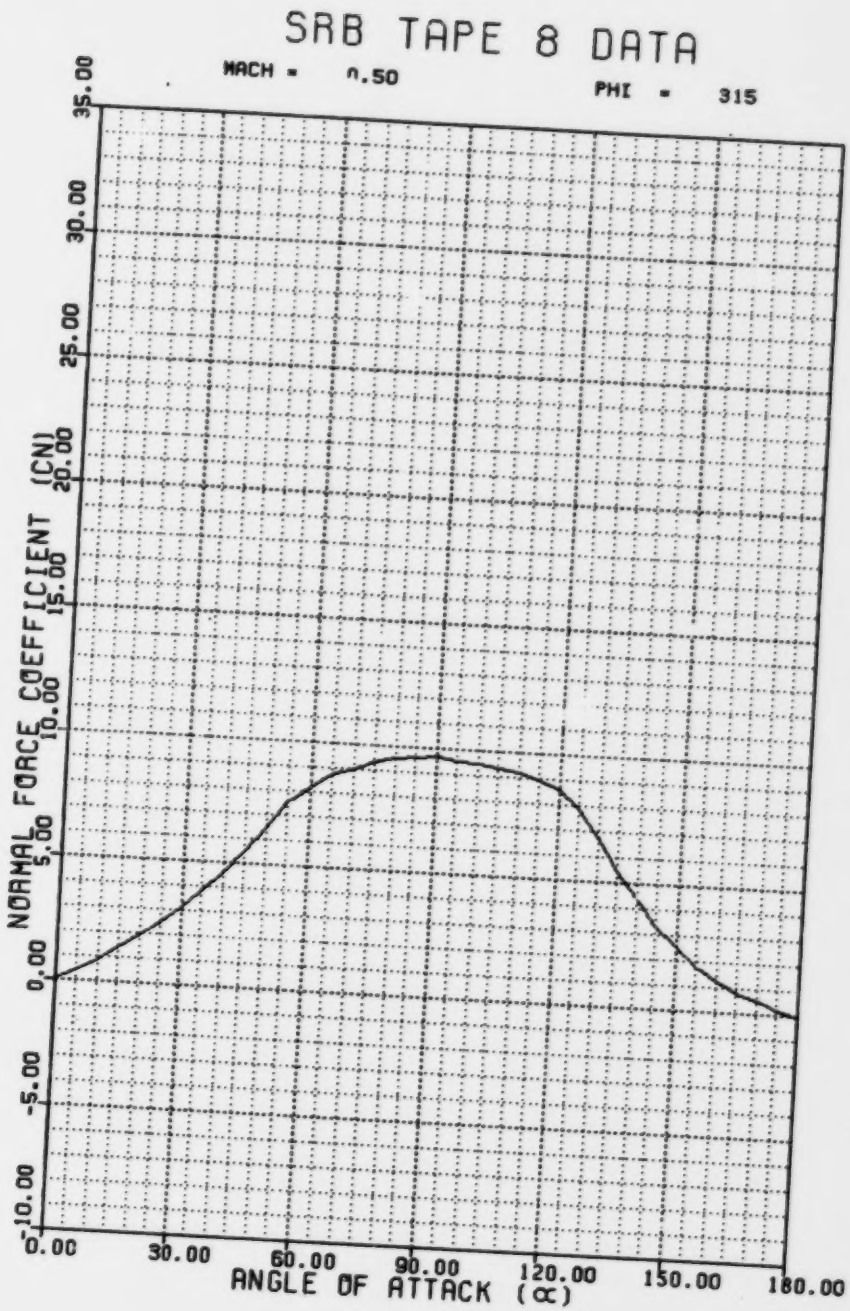
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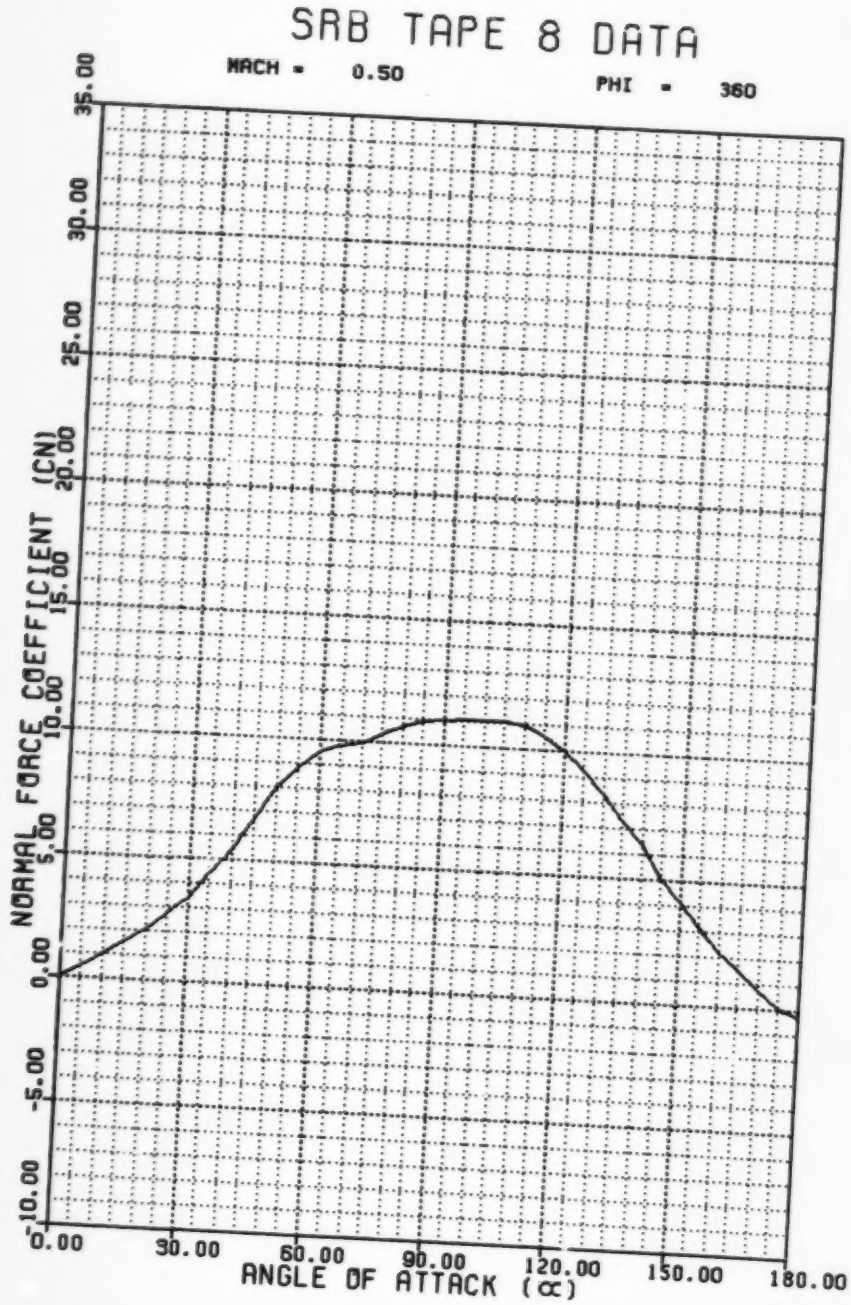
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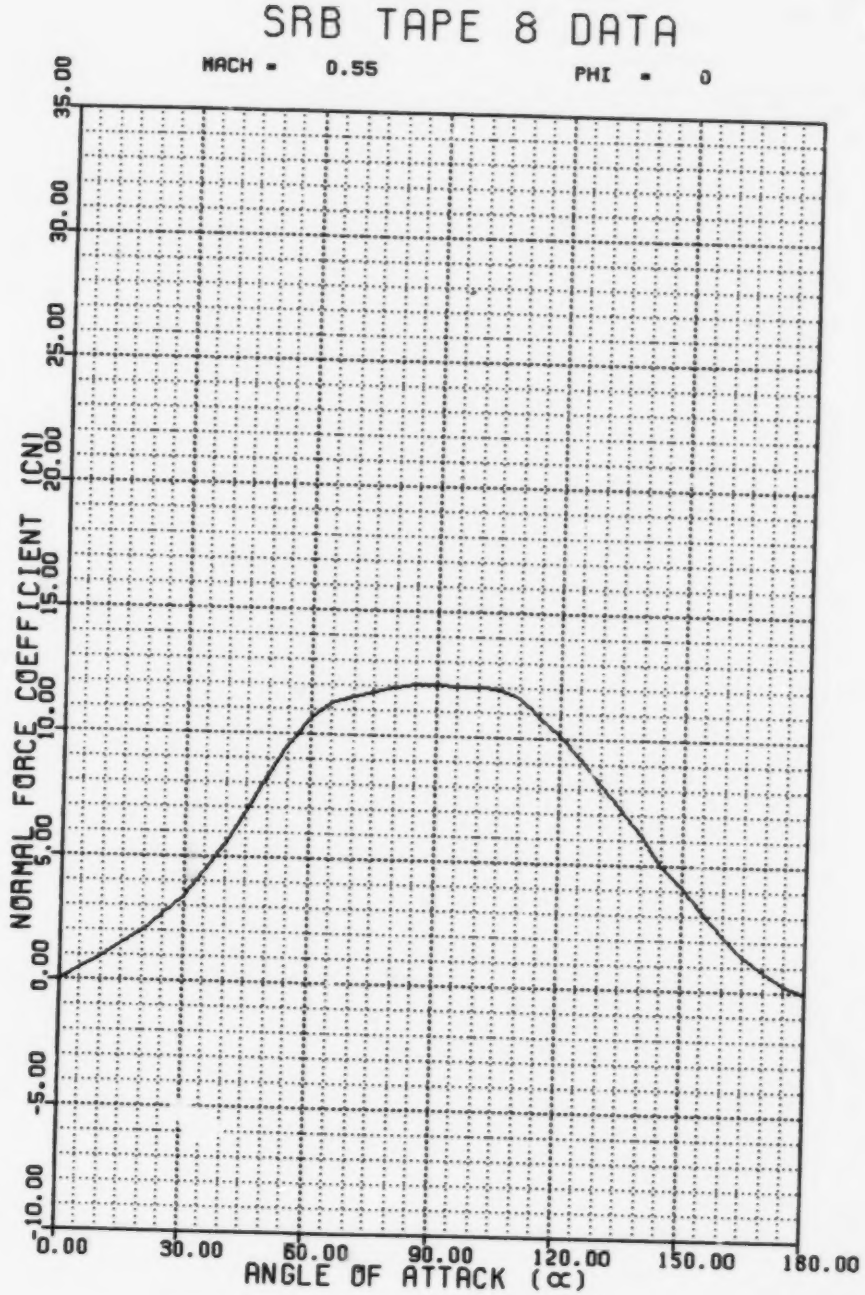
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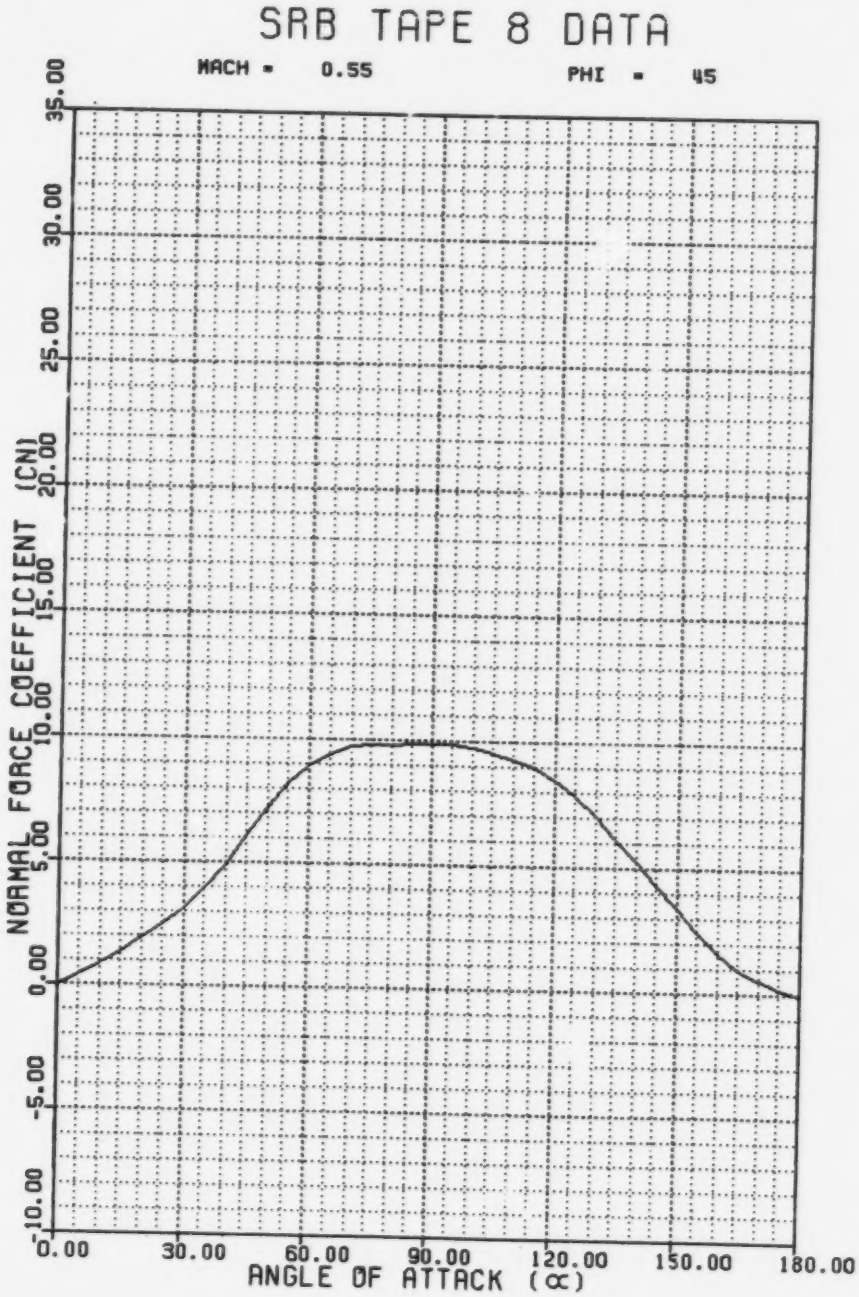
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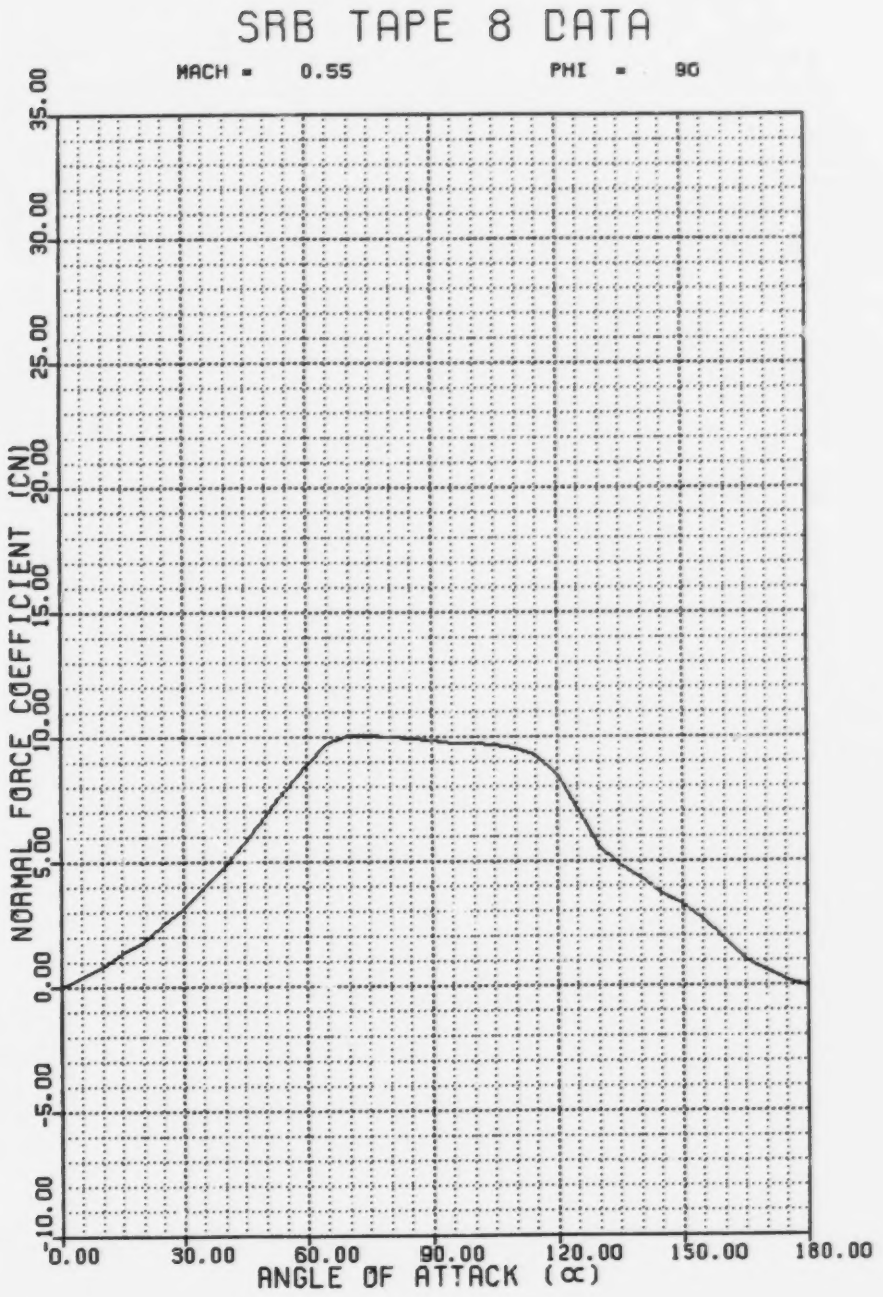
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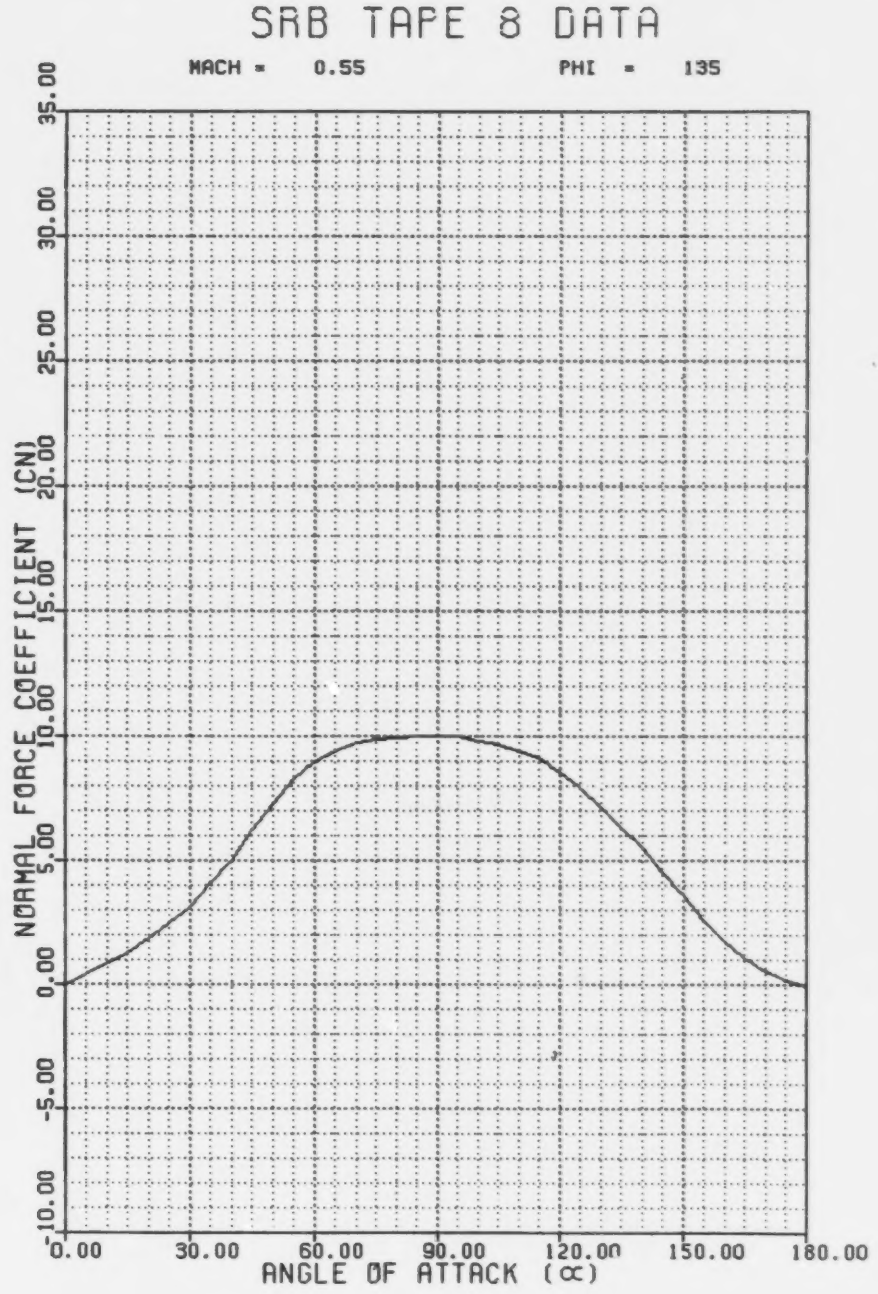
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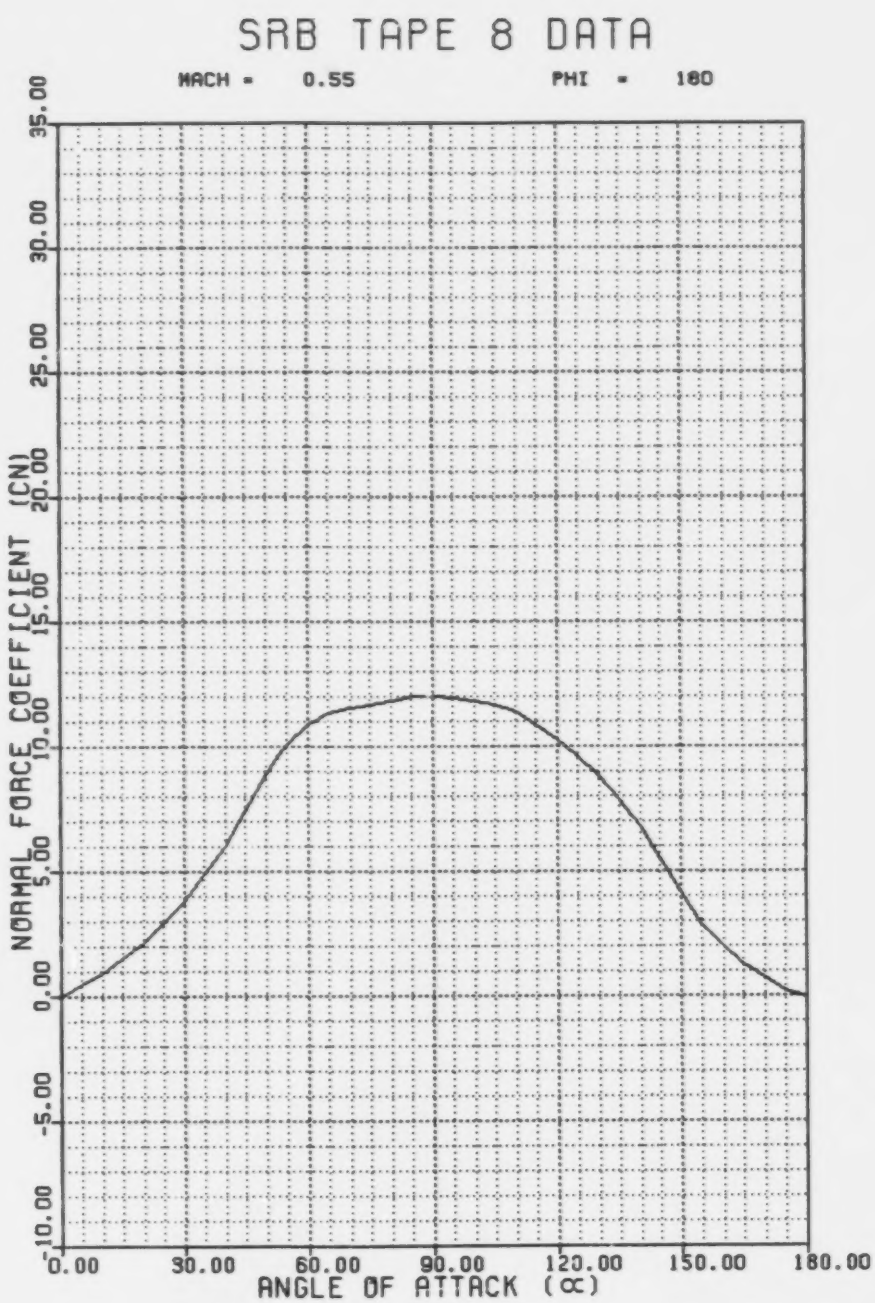
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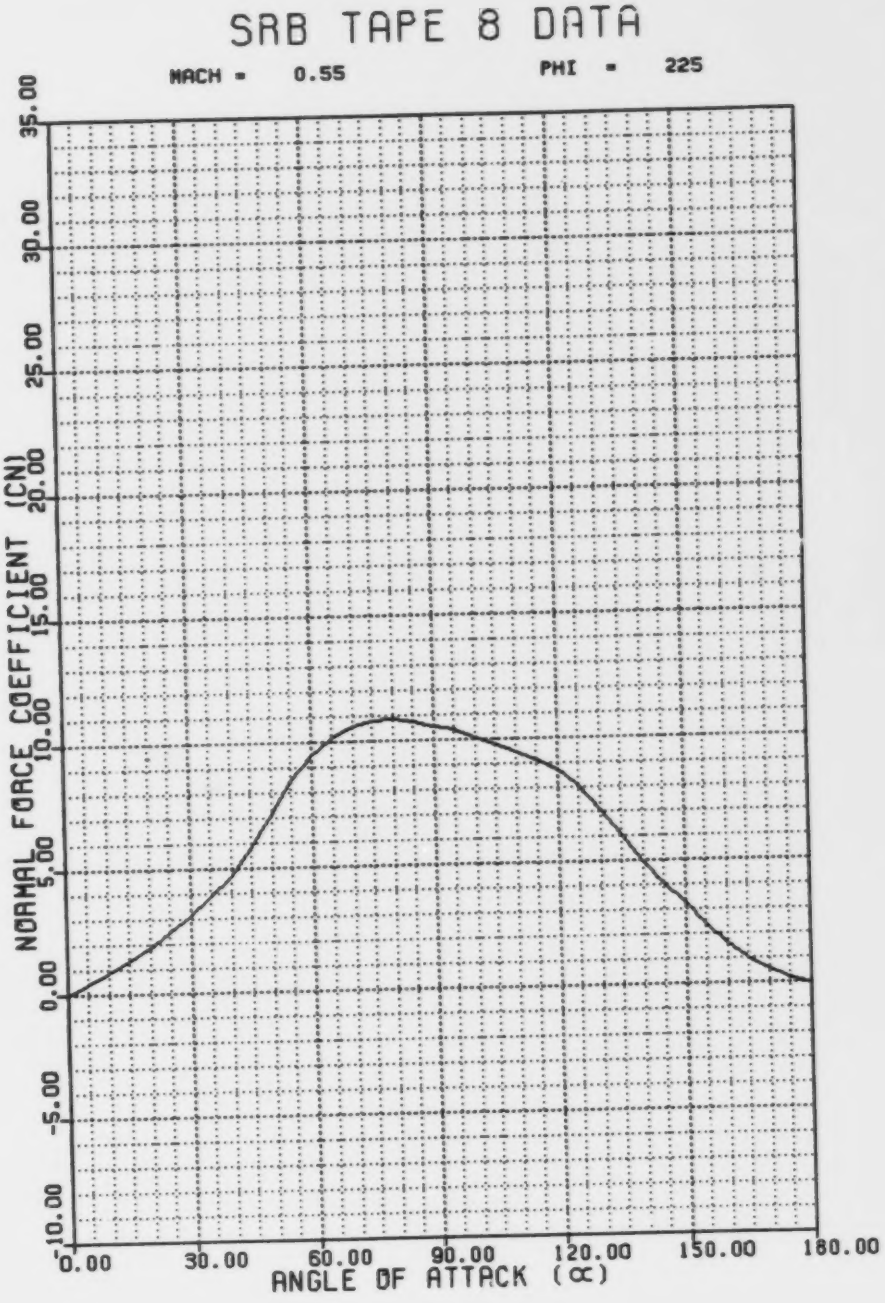
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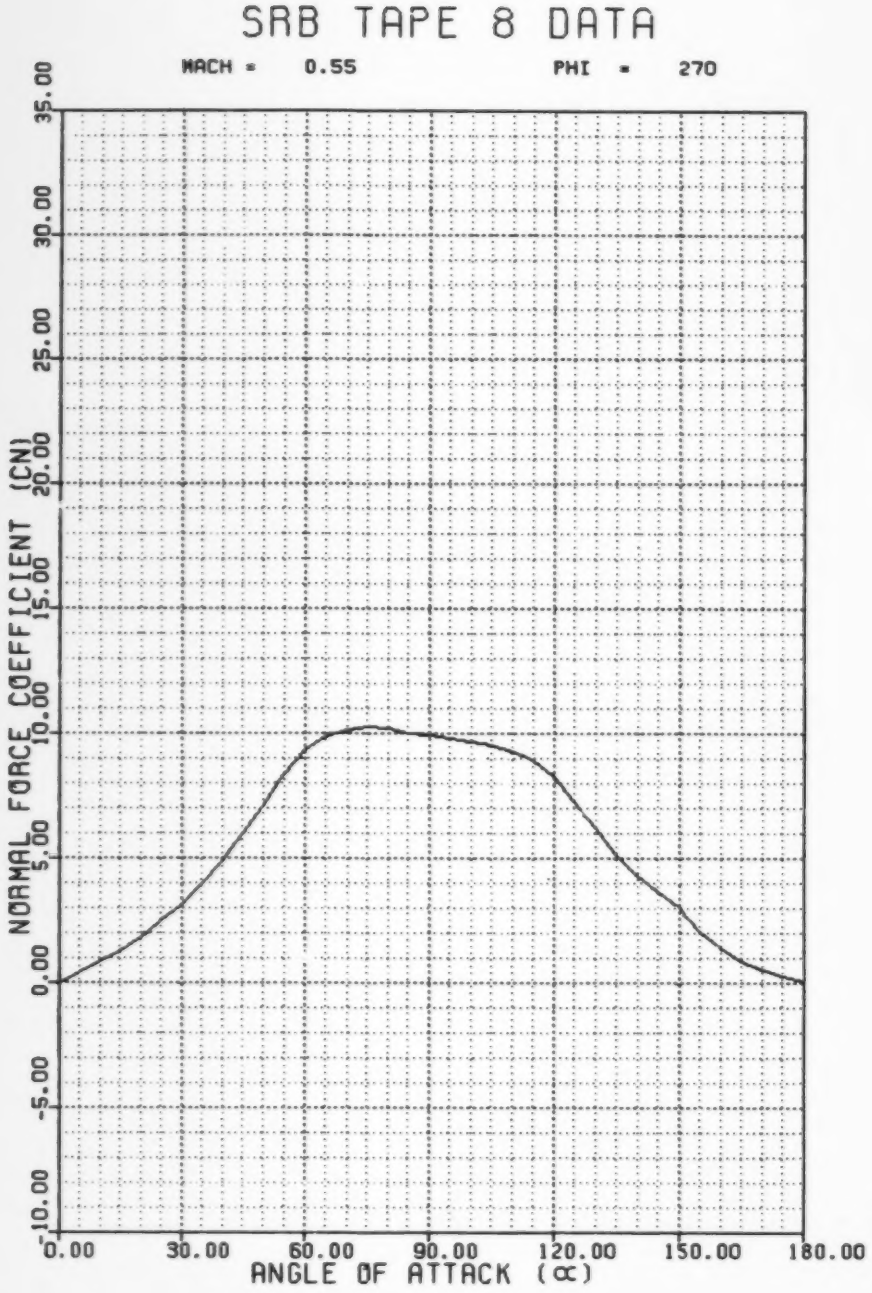
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 270
NORMAL FORCE COEFFICIENT (CN)
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120.00
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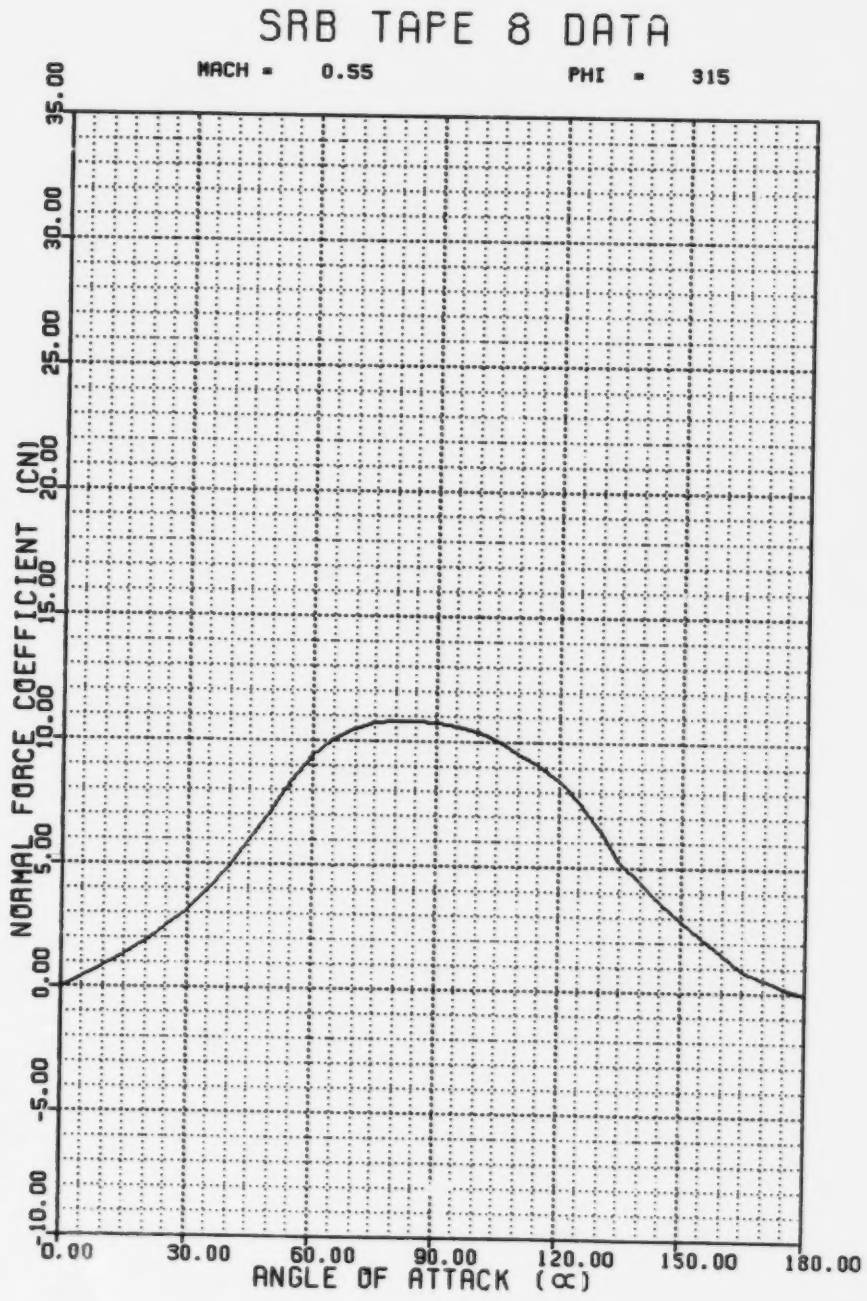
180.00
ANGLE OF ATTACK (α)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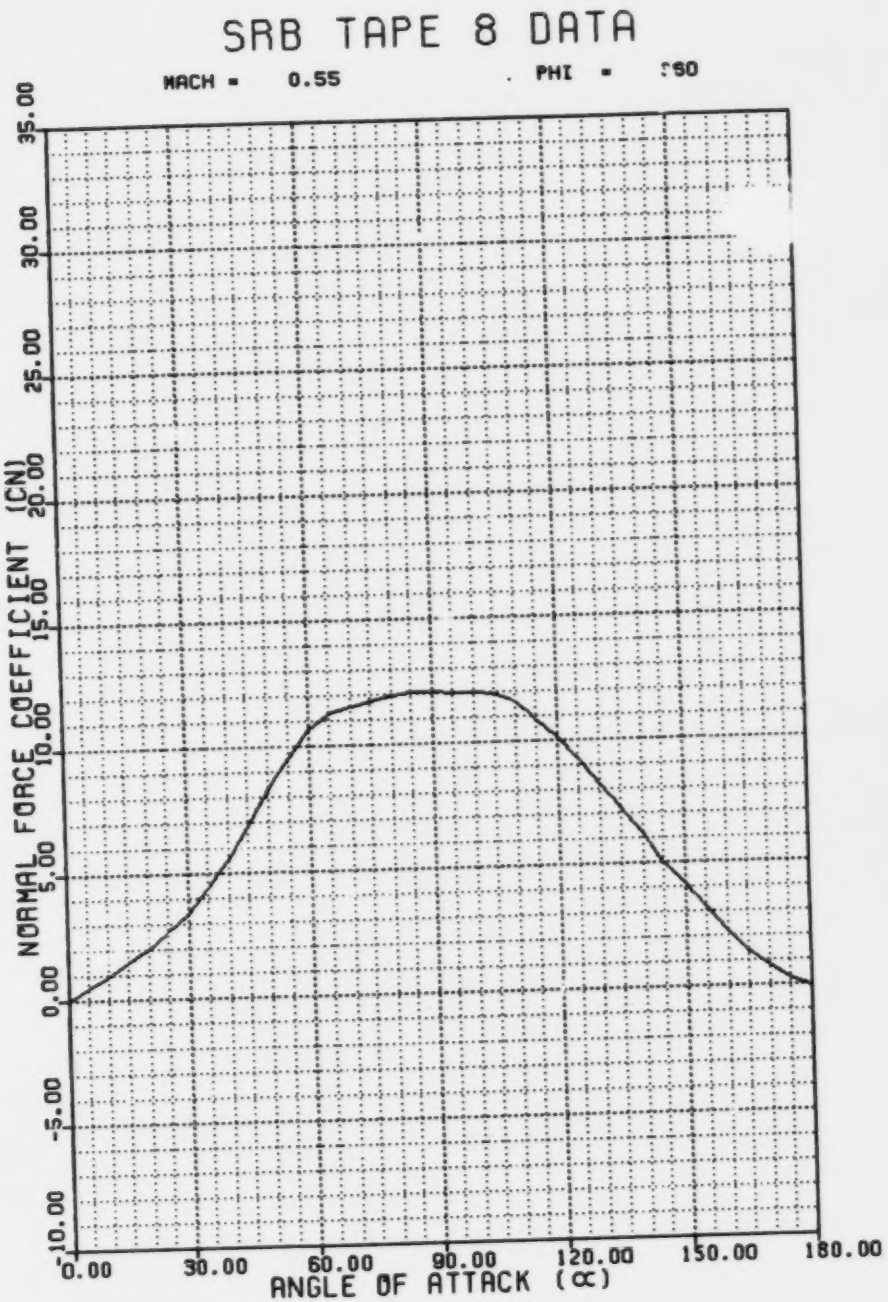
ANGLE OF ATTACK (α)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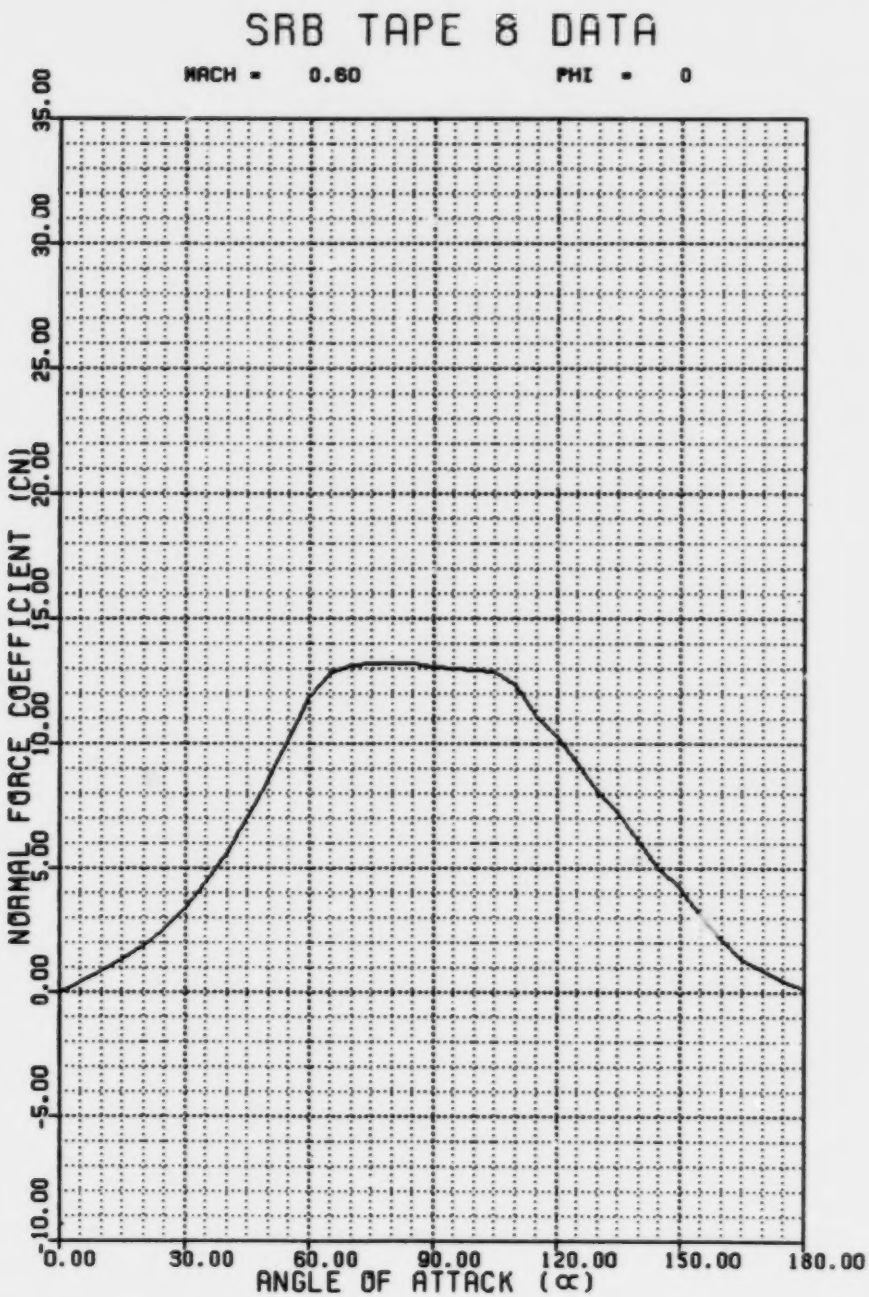
ANGLE OF ATTACK (α)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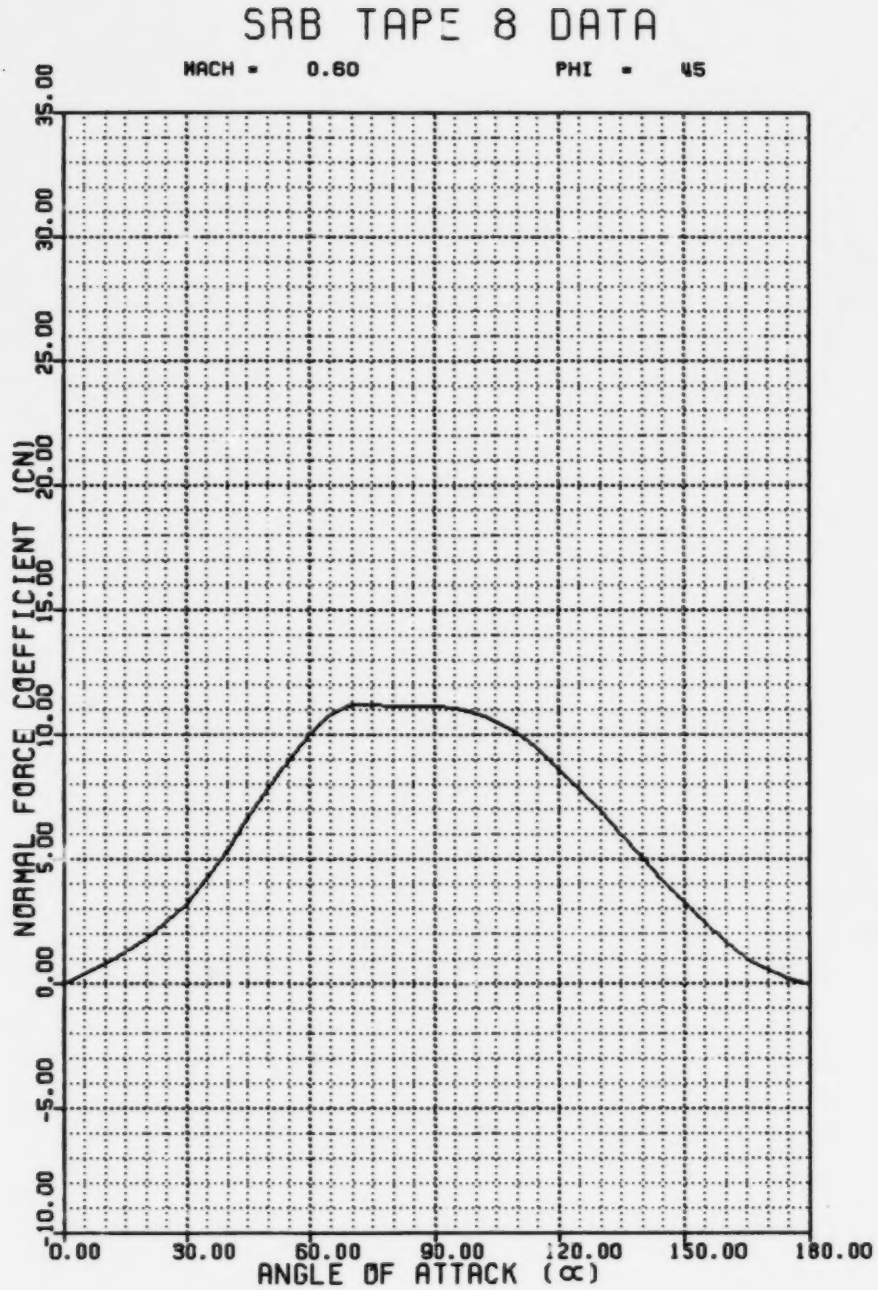
ANGLE OF ATTACK (α)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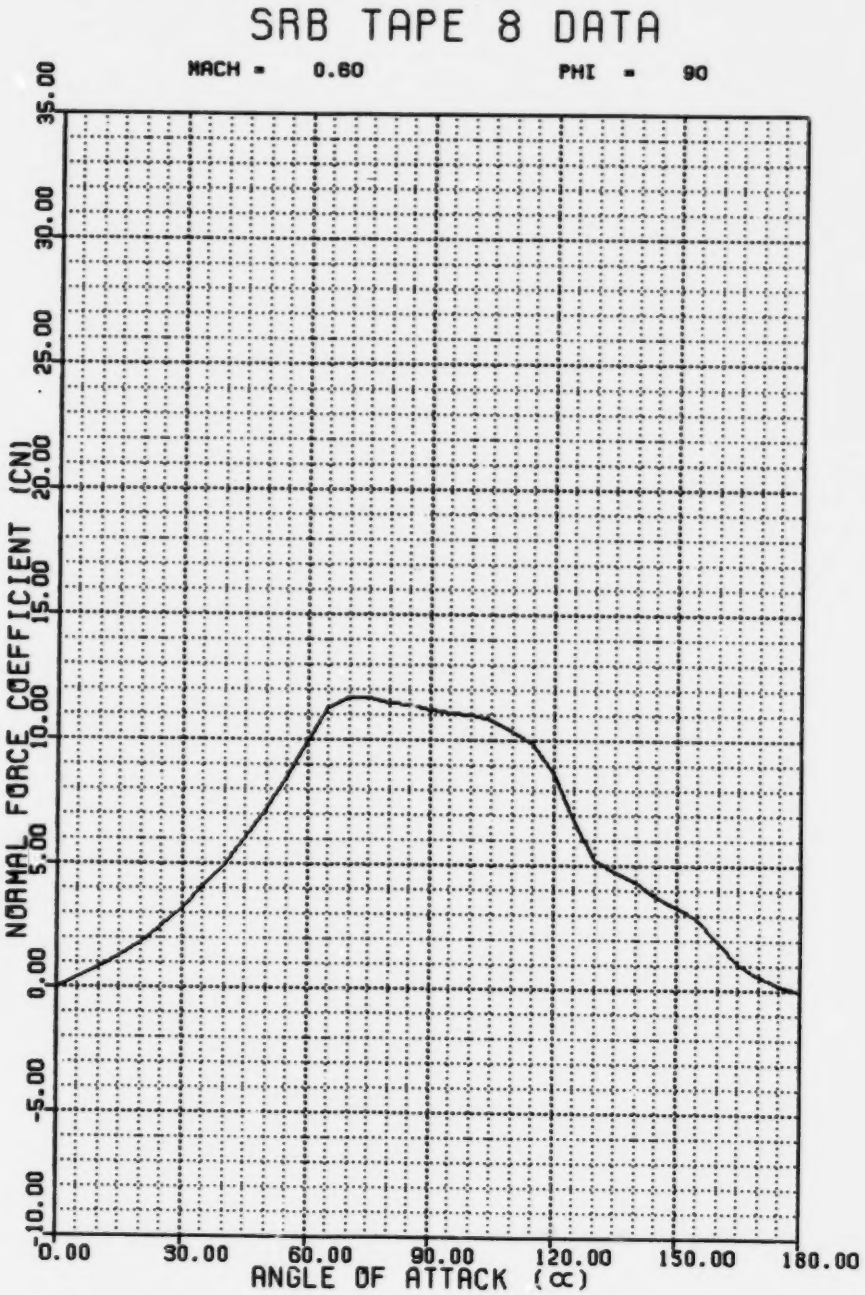
ANGLE OF ATTACK (α)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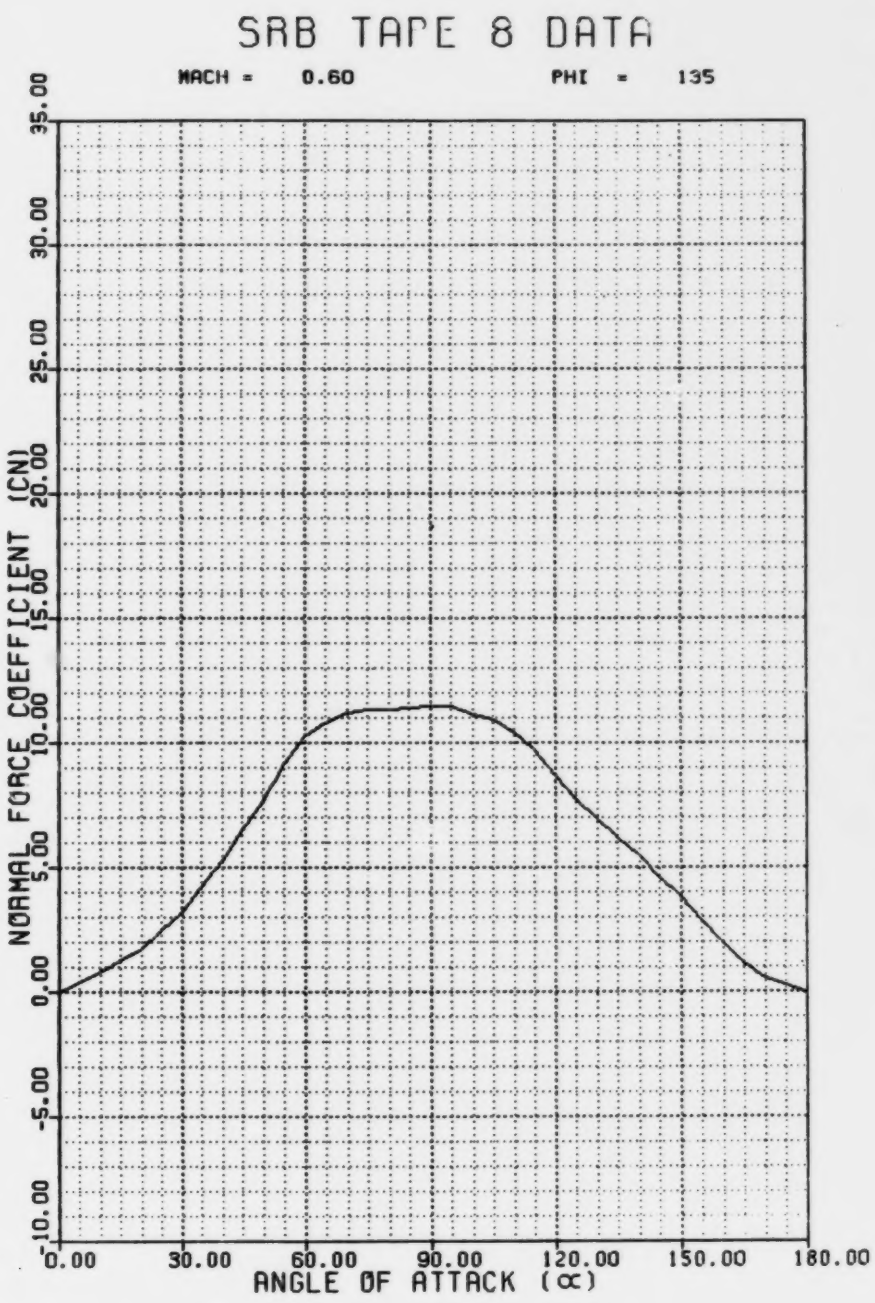
ANGLE OF ATTACK (α)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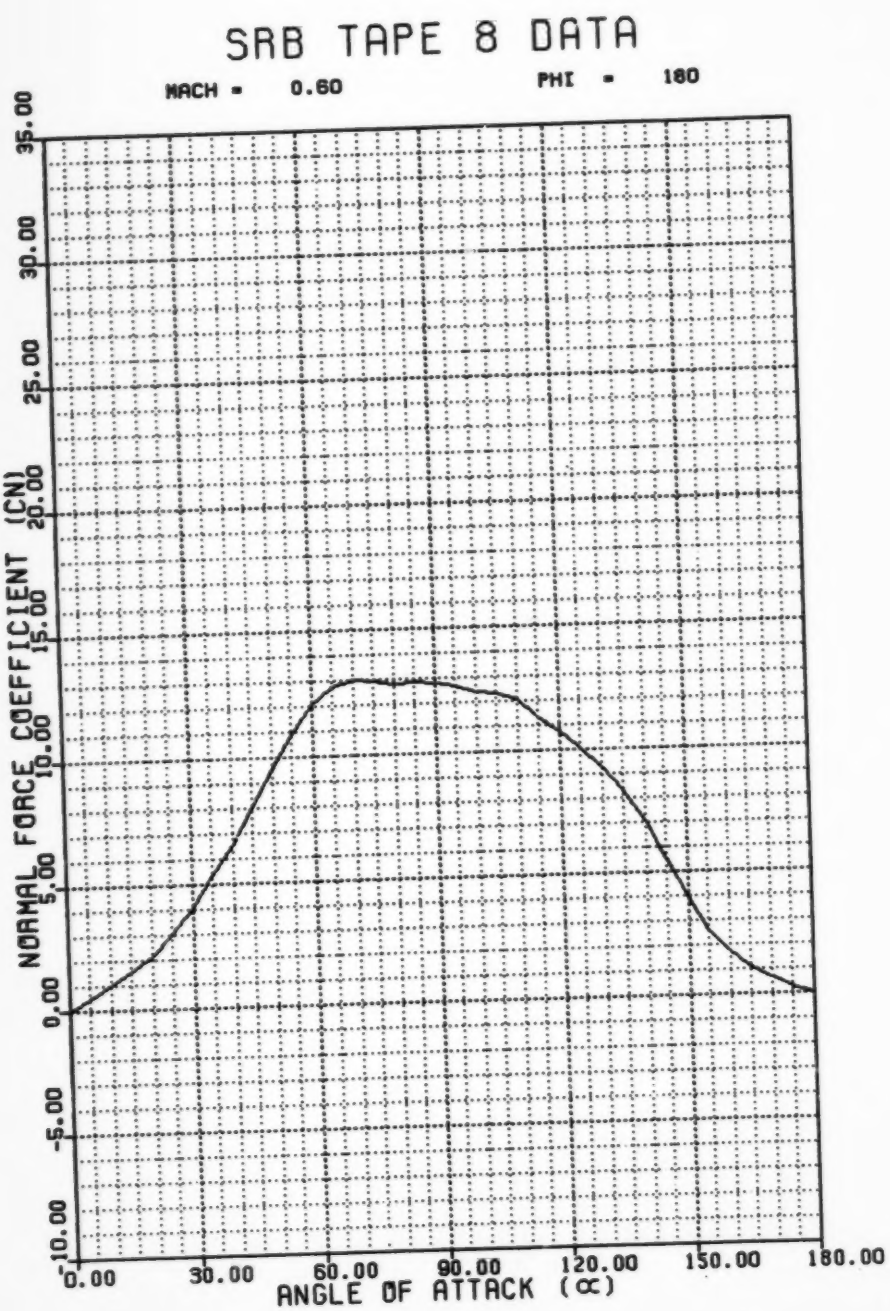
ANGLE OF ATTACK (α)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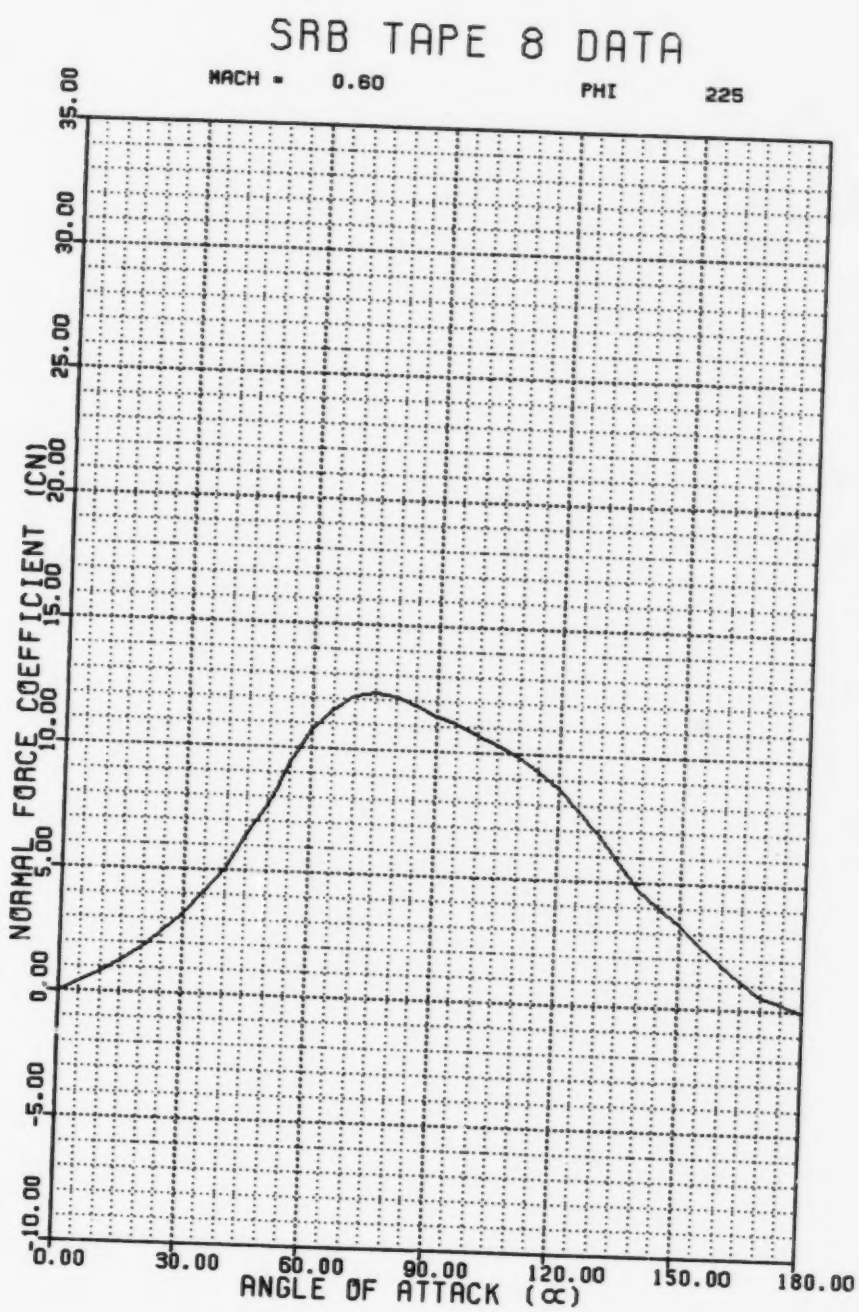
ANGLE OF ATTACK (α)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120.00
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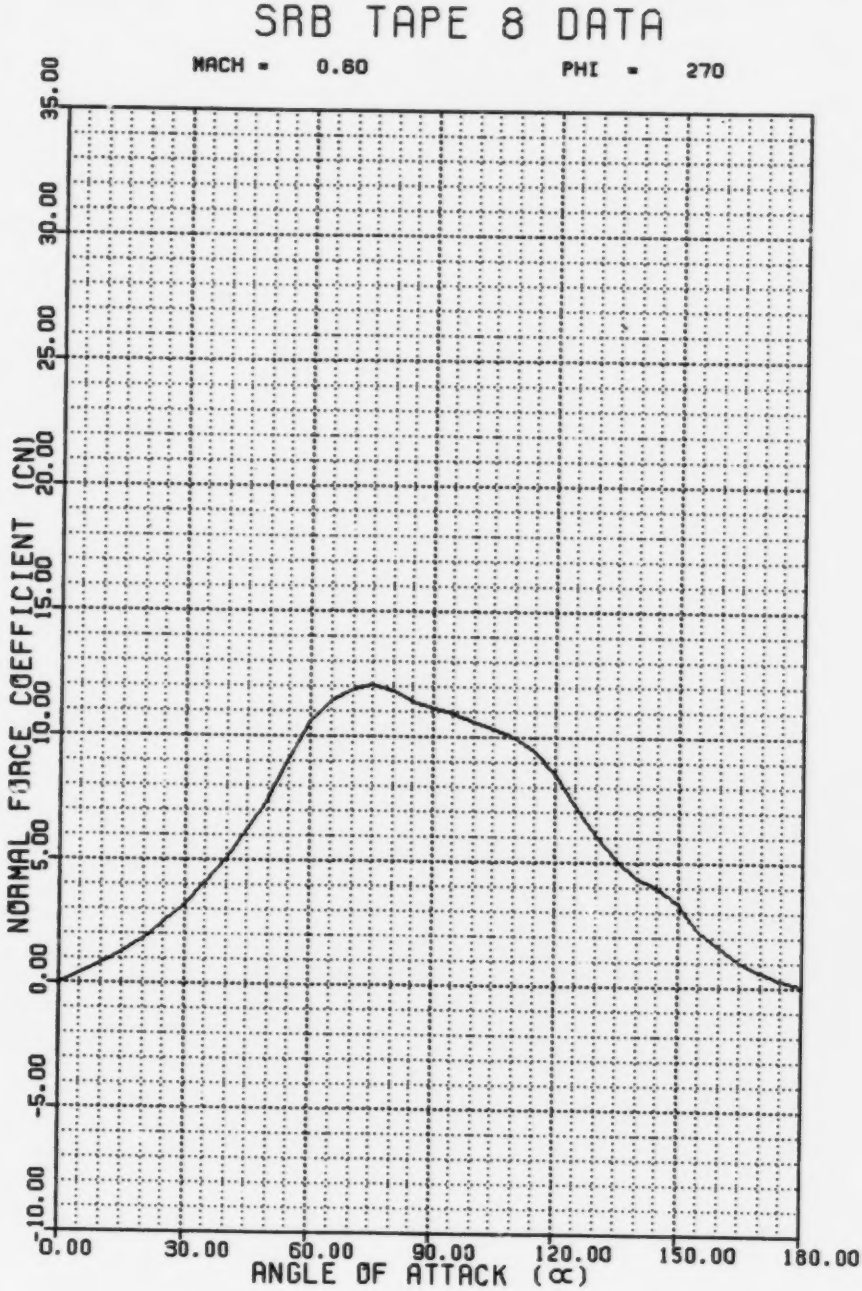
ANGLE OF ATTACK (α)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5.00
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60.00
90.00
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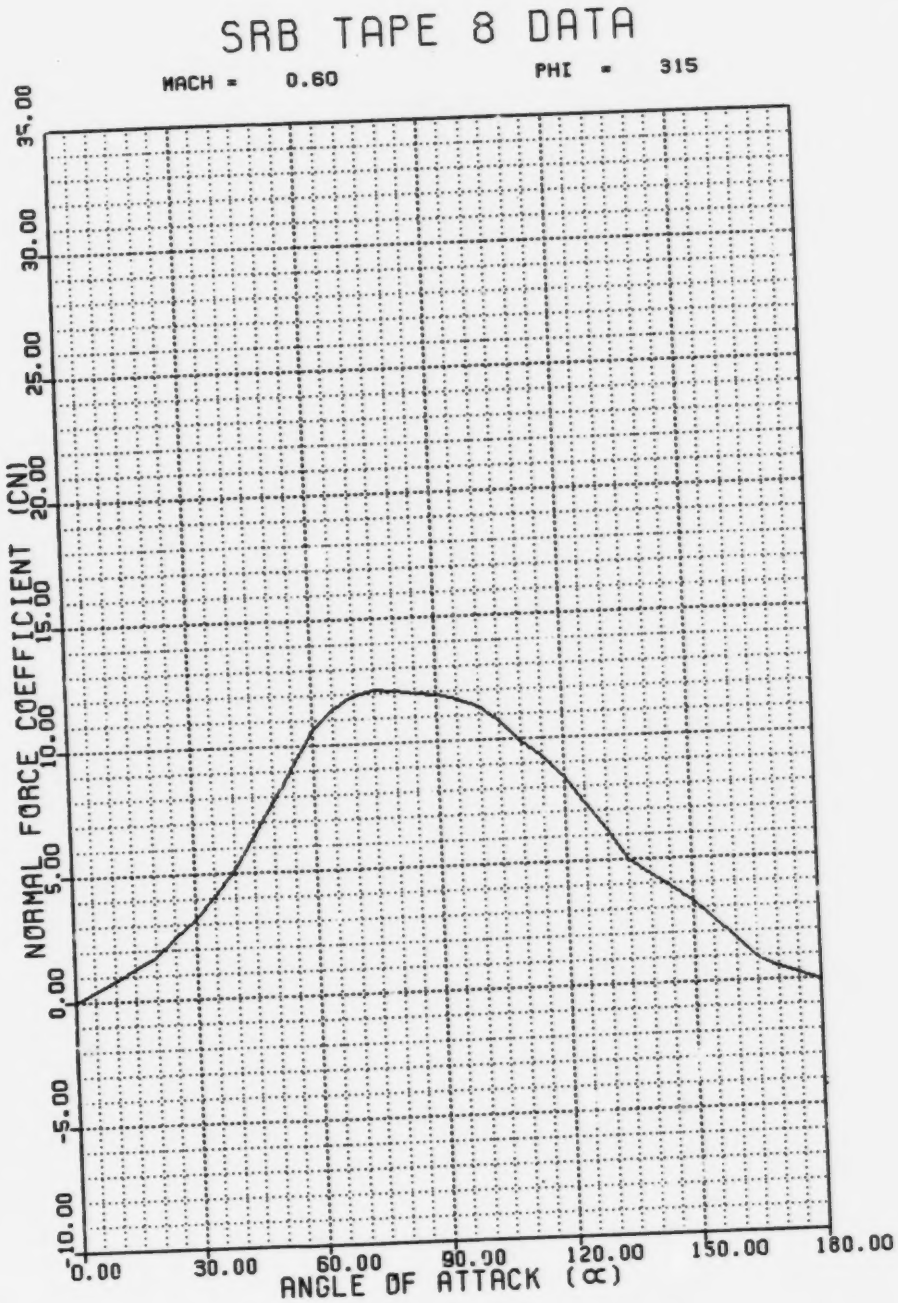
ANGLE OF ATTACK (α)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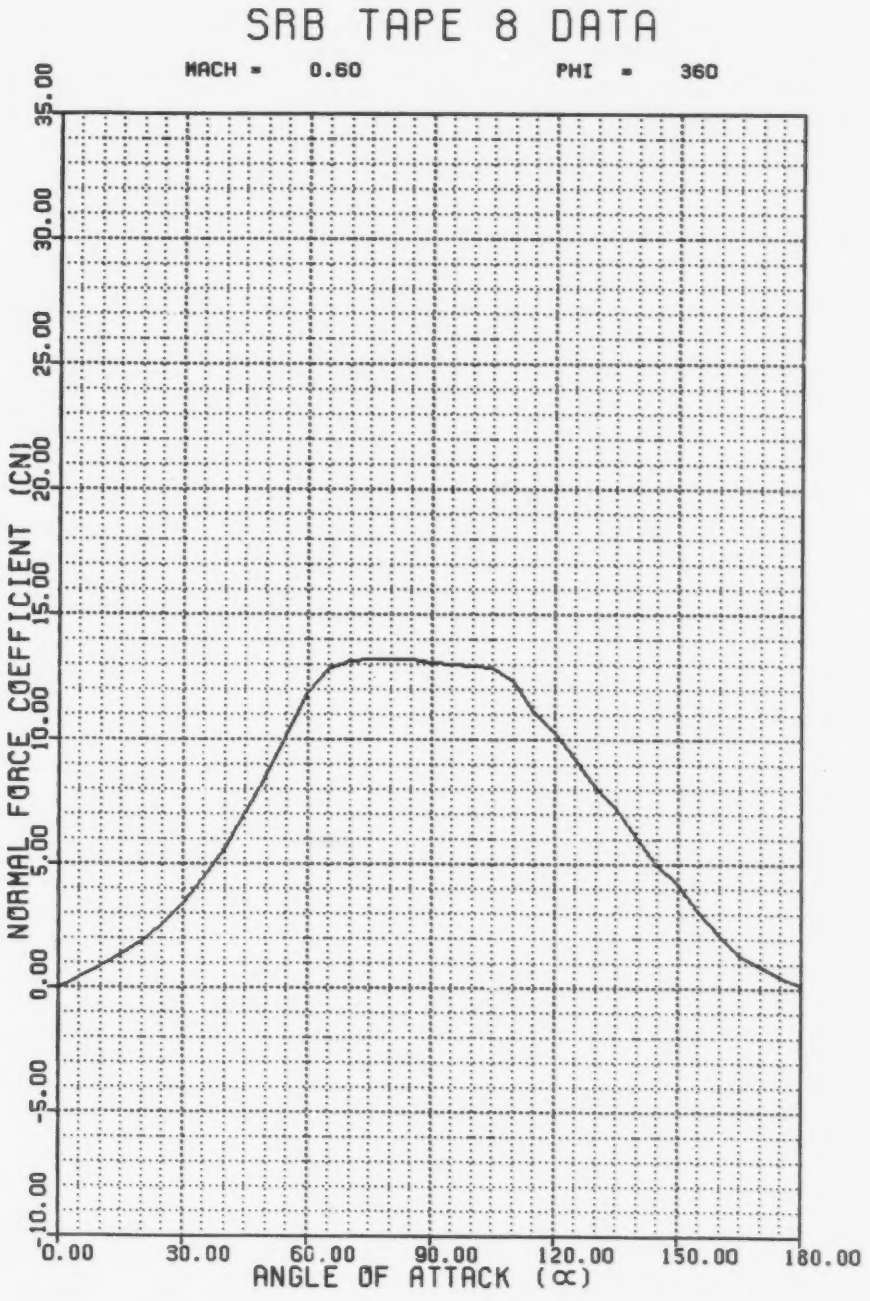
ANGLE OF ATTACK (α)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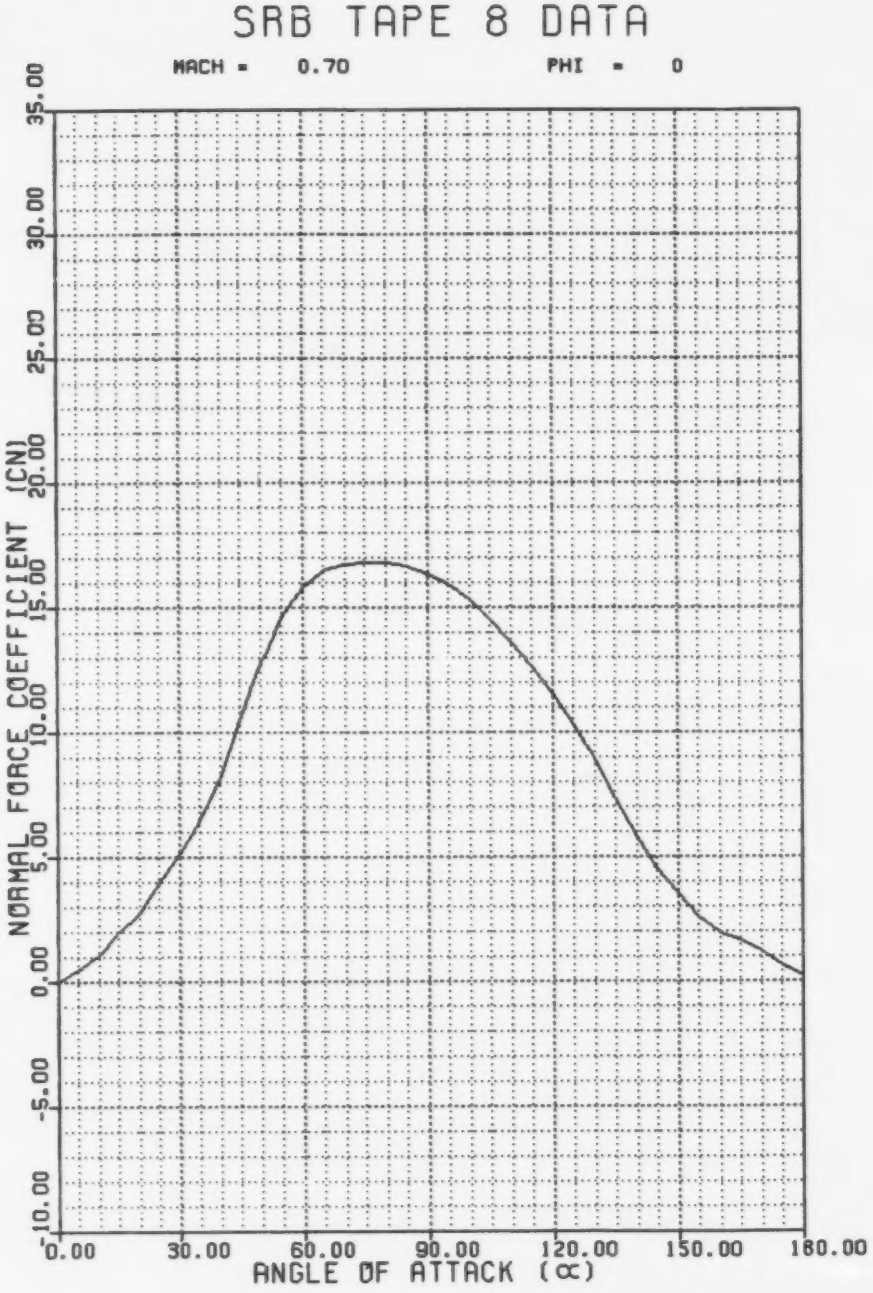
ANGLE OF ATTACK (α)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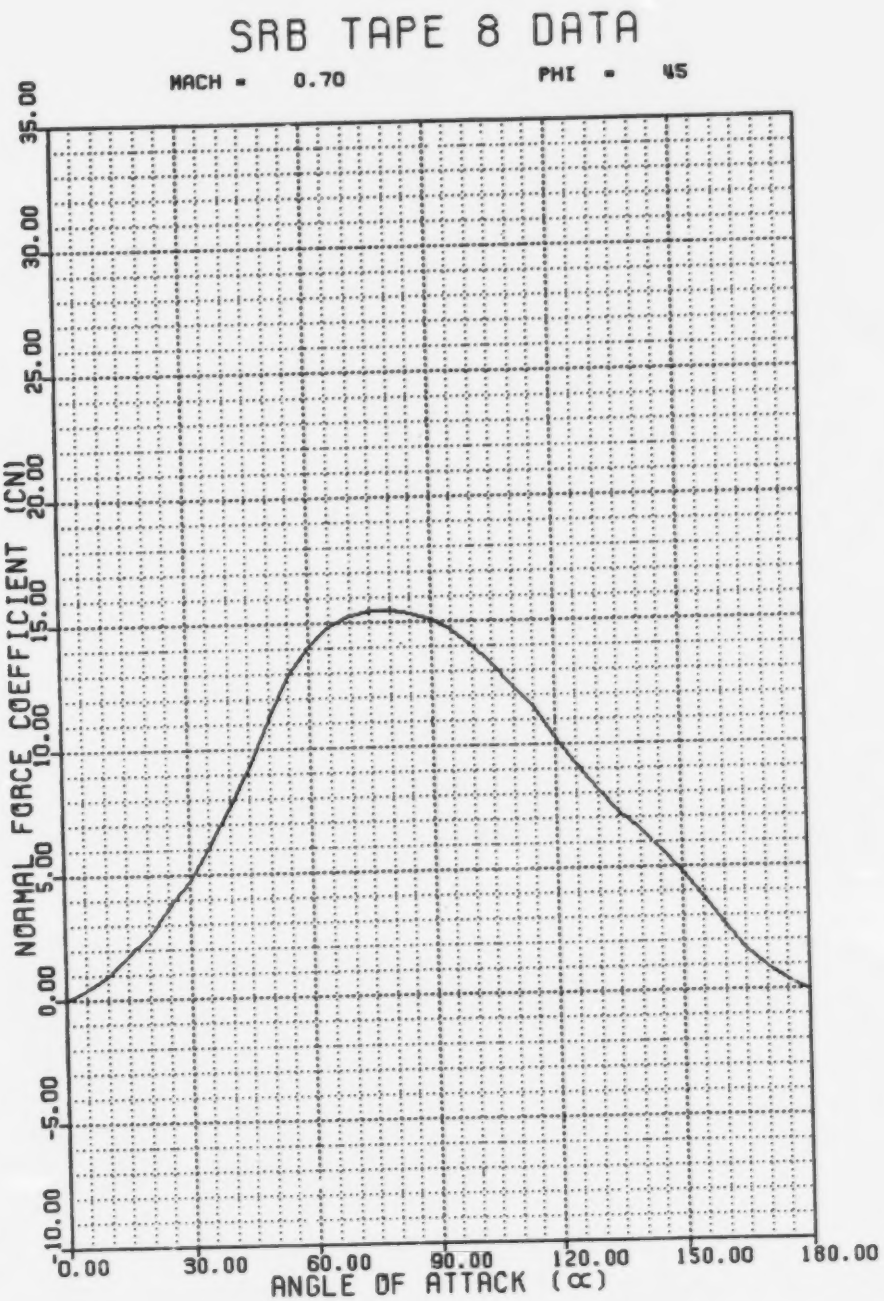
ANGLE OF ATTACK (α)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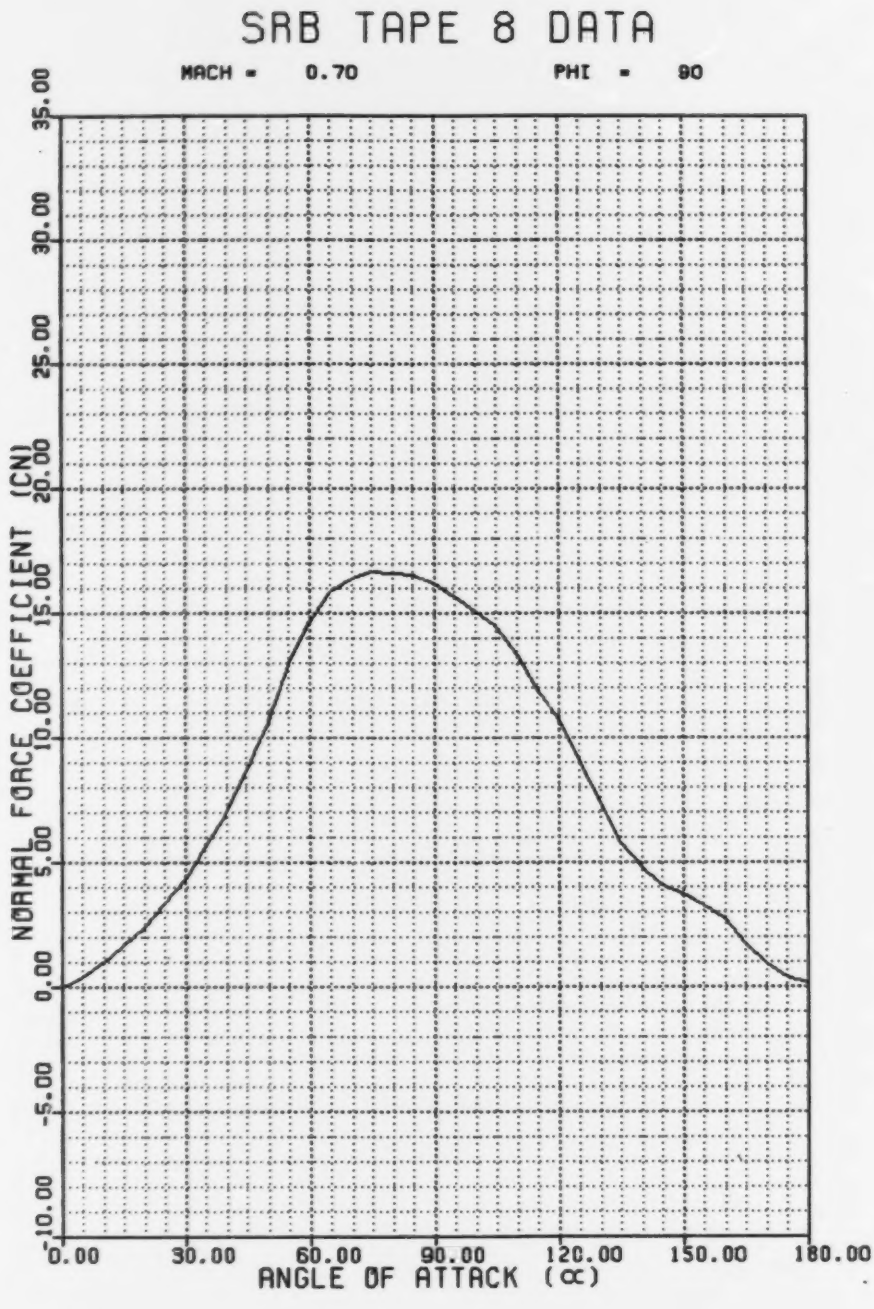
ANGLE OF ATTACK (α)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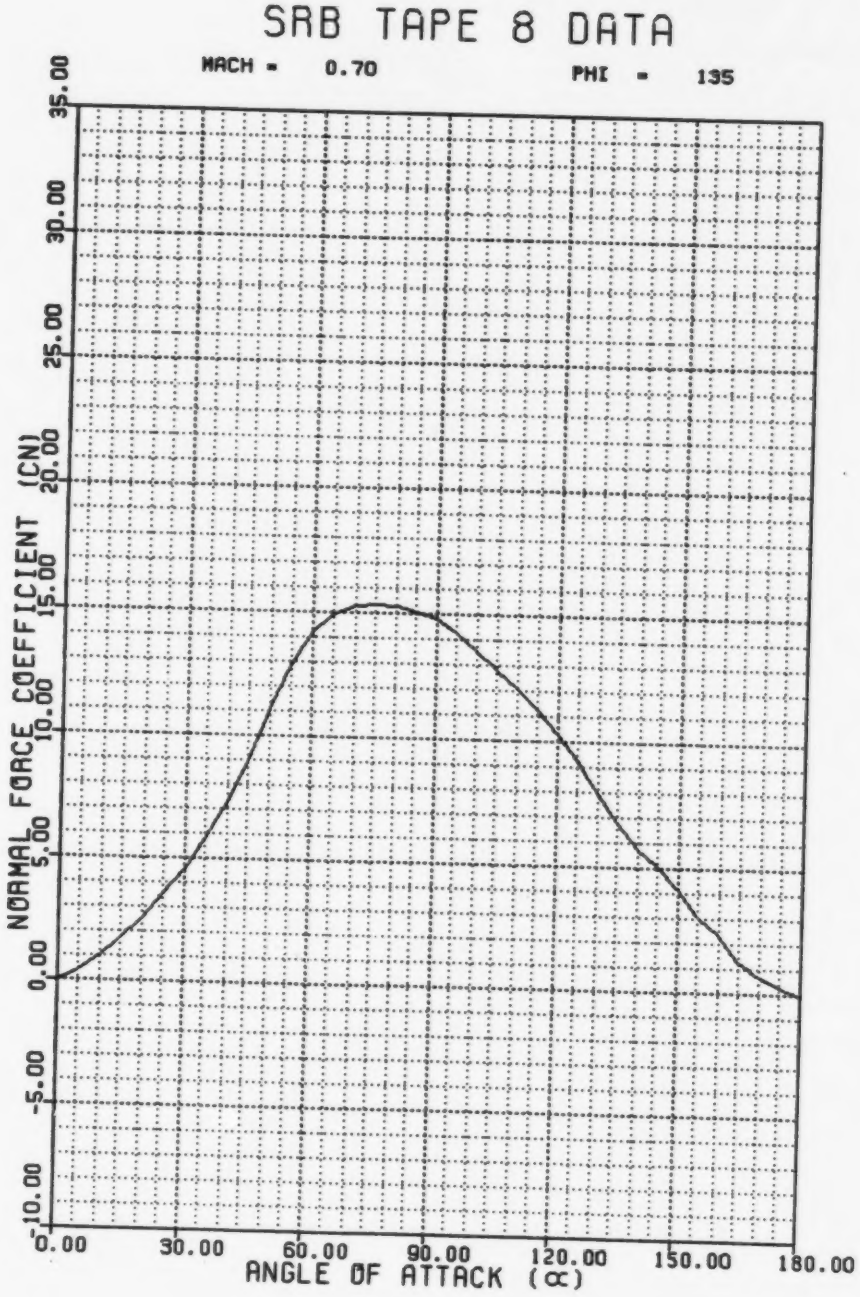
ANGLE OF ATTACK (α)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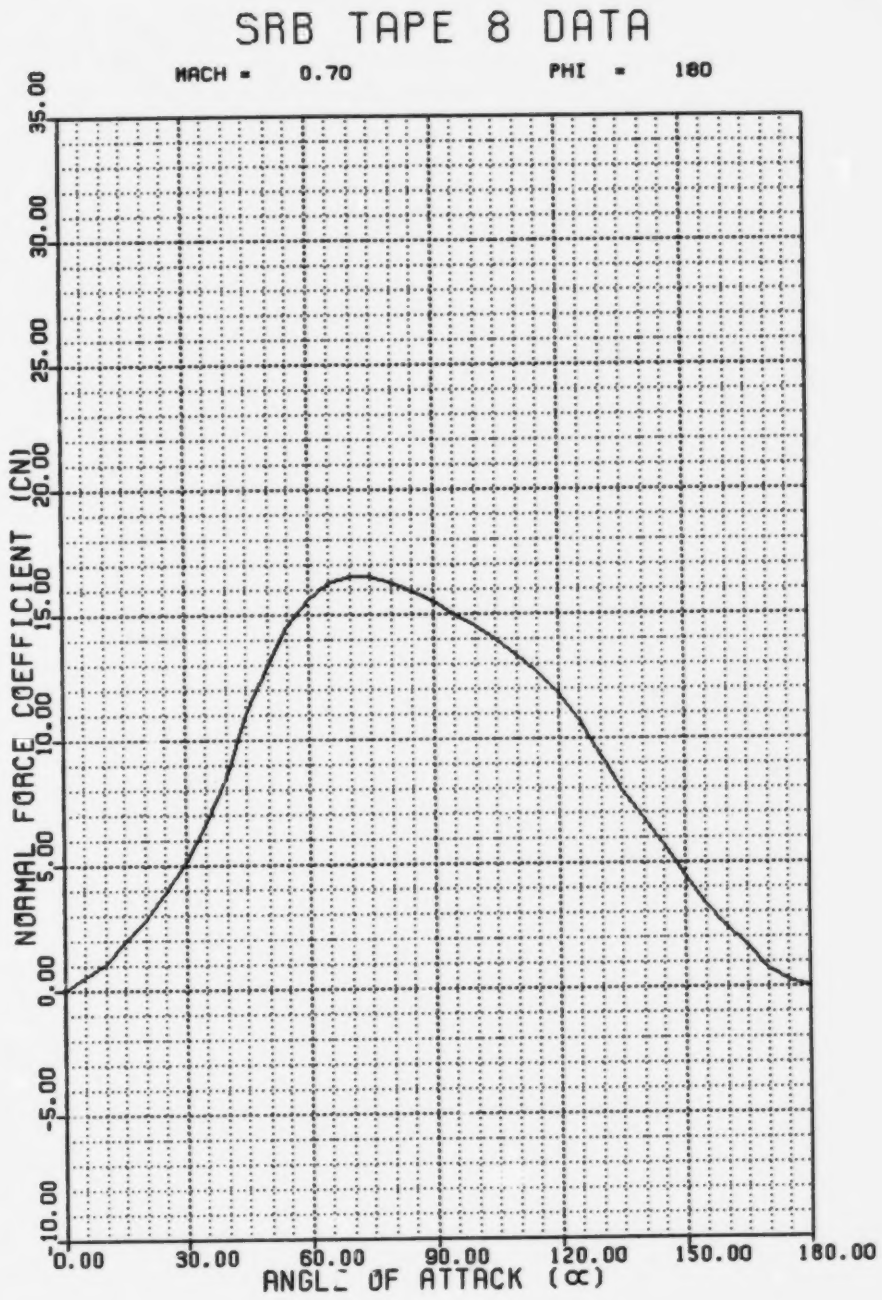
ANGLE OF ATTACK (α)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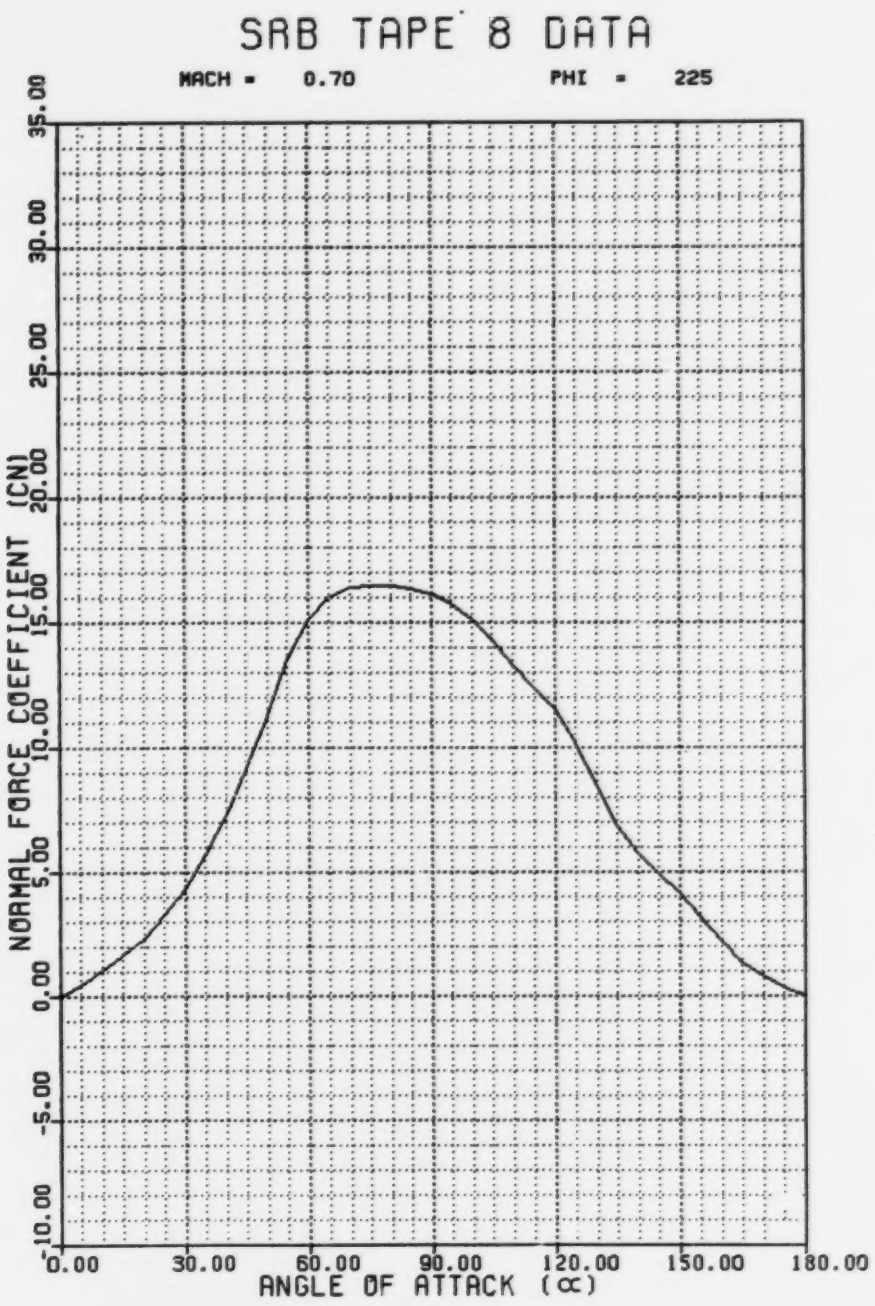
ANGLE OF ATTACK (α)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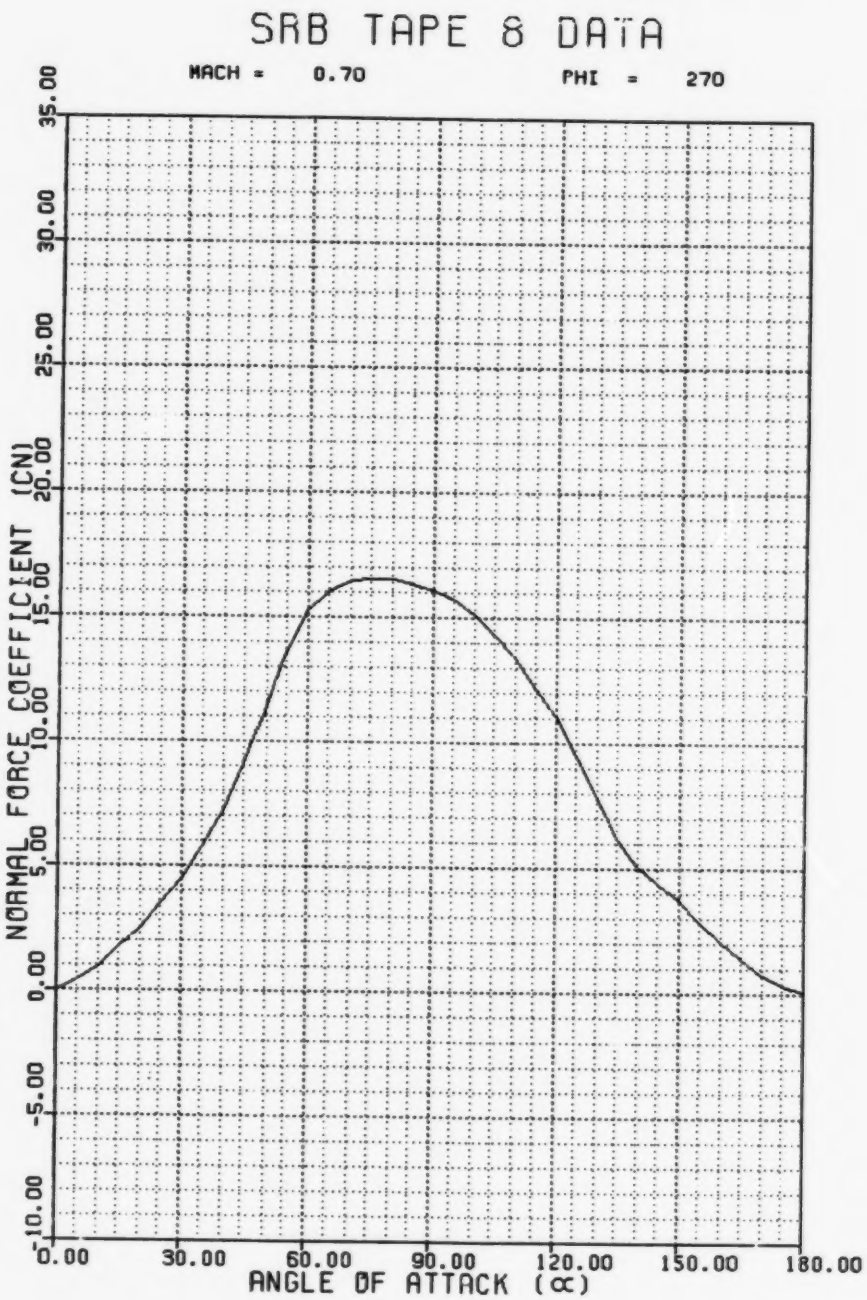
ANGLE OF ATTACK (α)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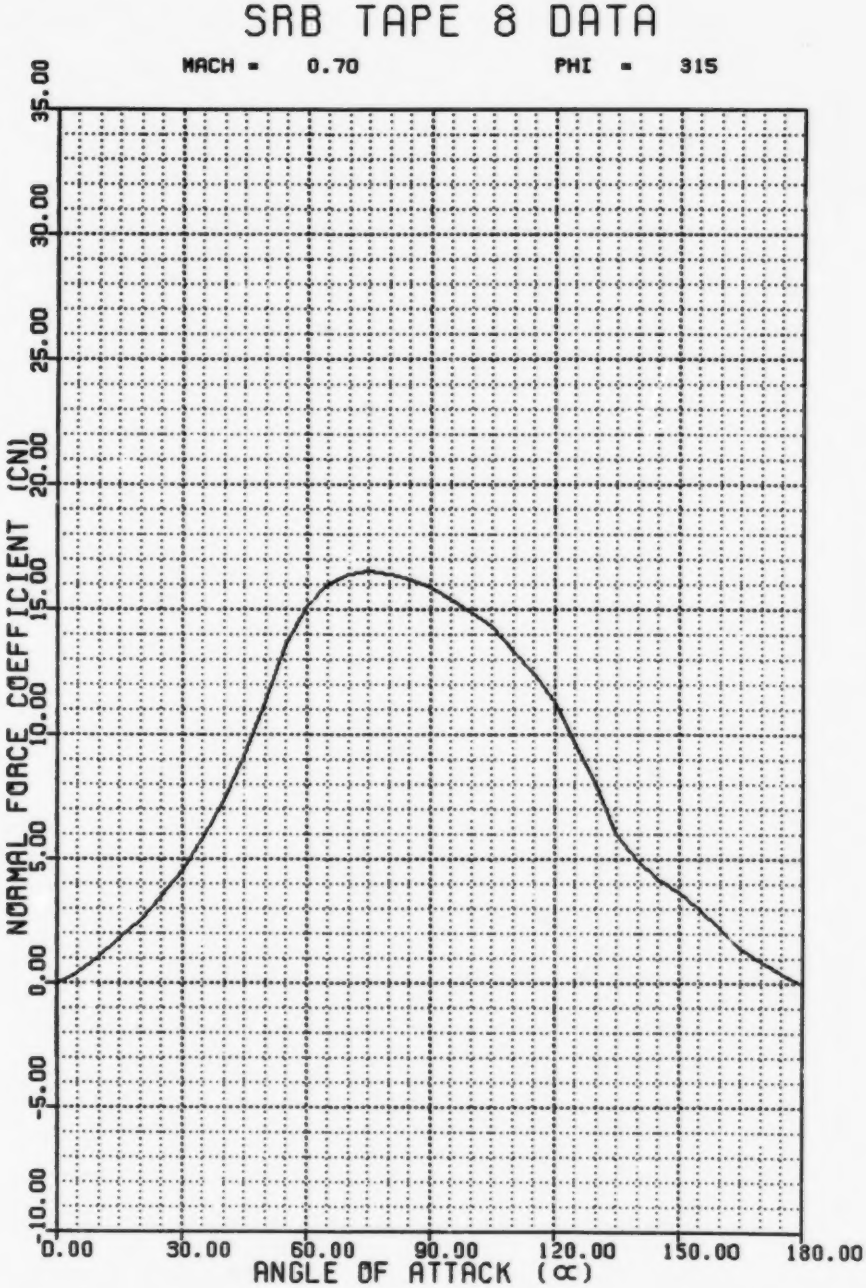
ANGLE OF ATTACK (α)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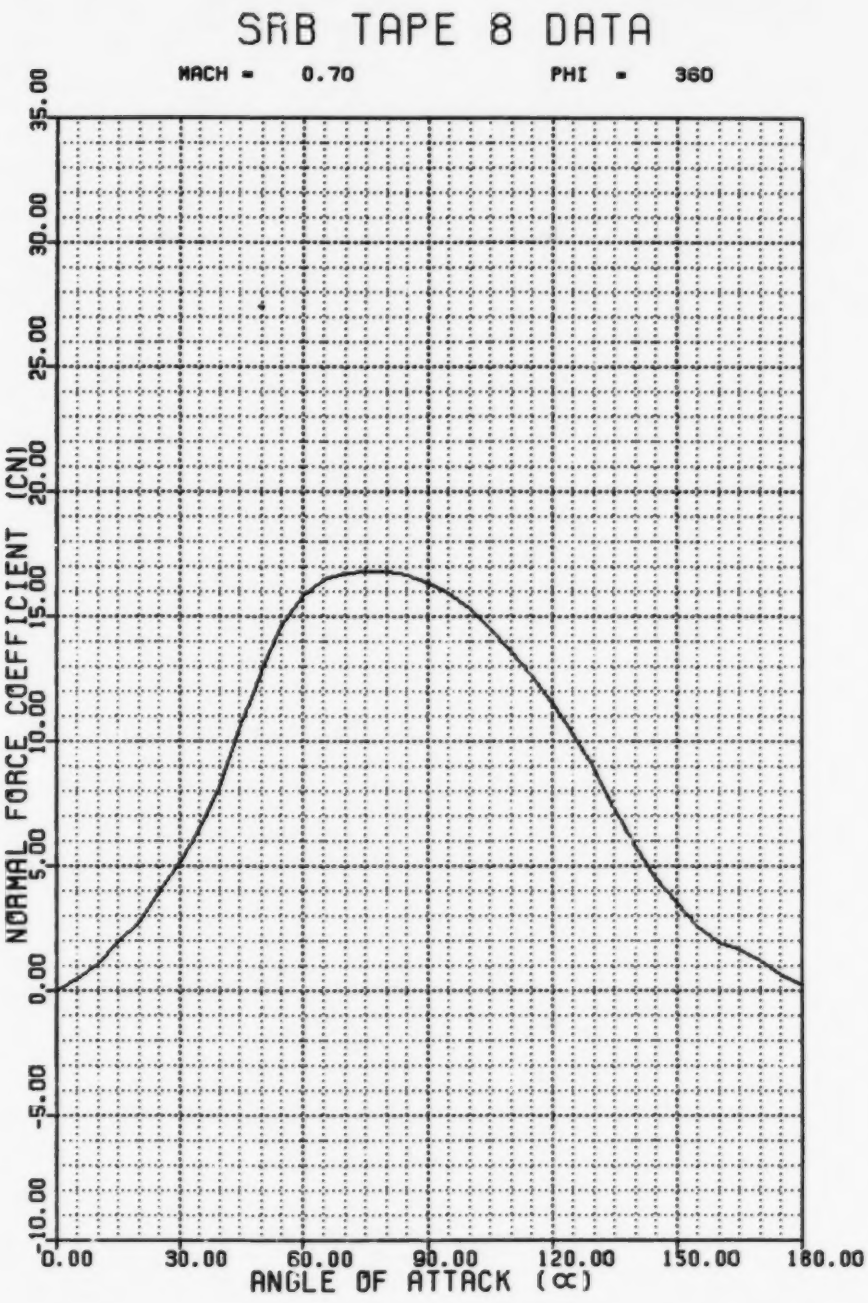
ANGLE OF ATTACK (α)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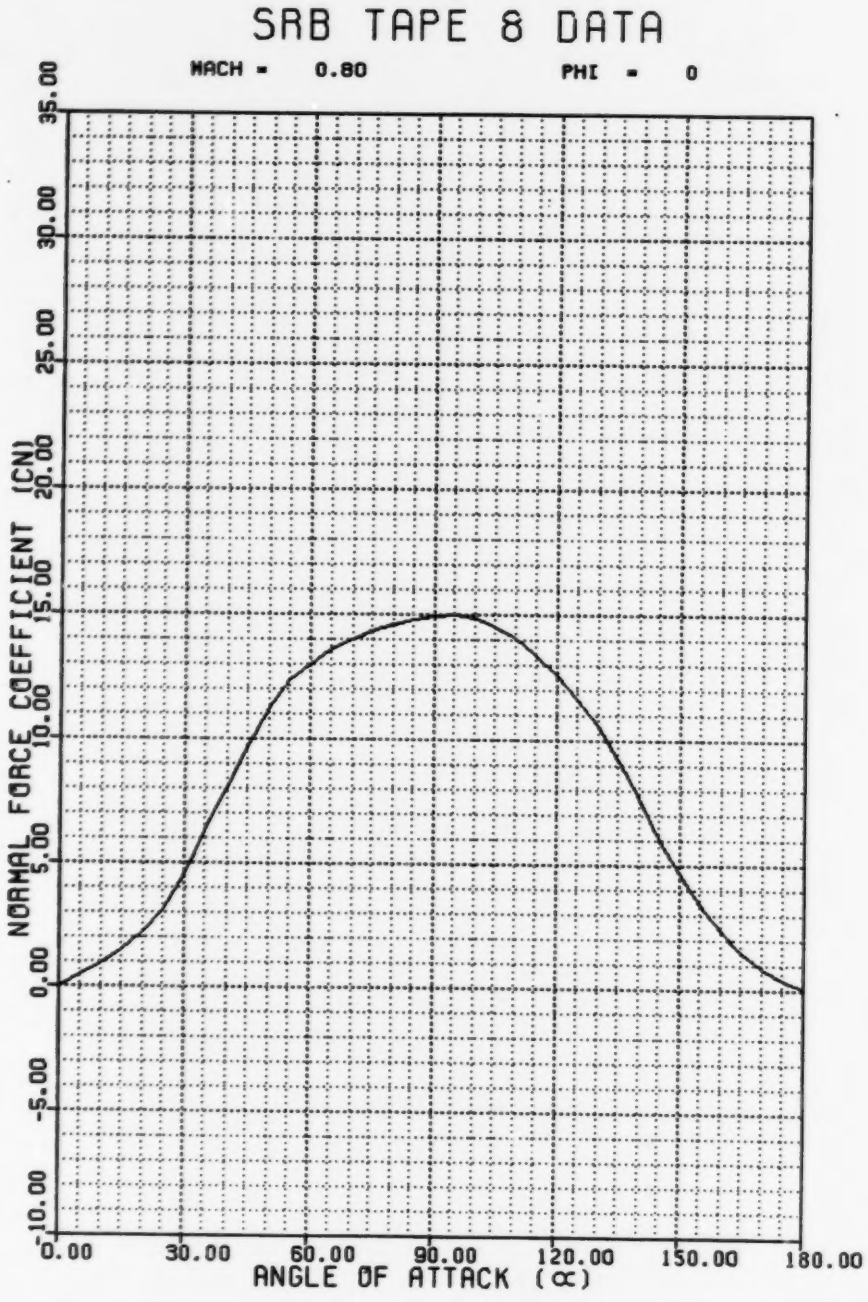
ANGLE OF ATTACK (α)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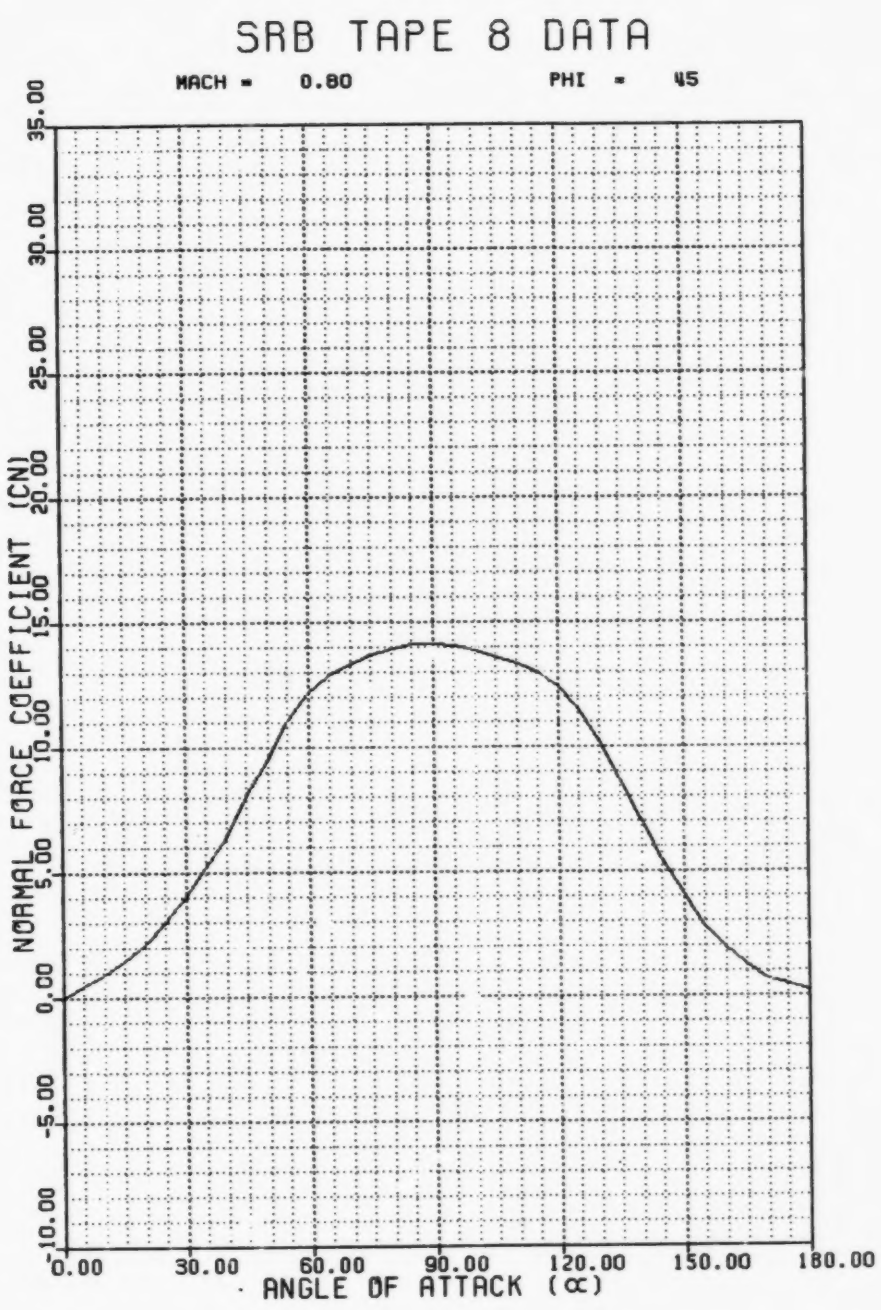
ANGLE OF ATTACK (α)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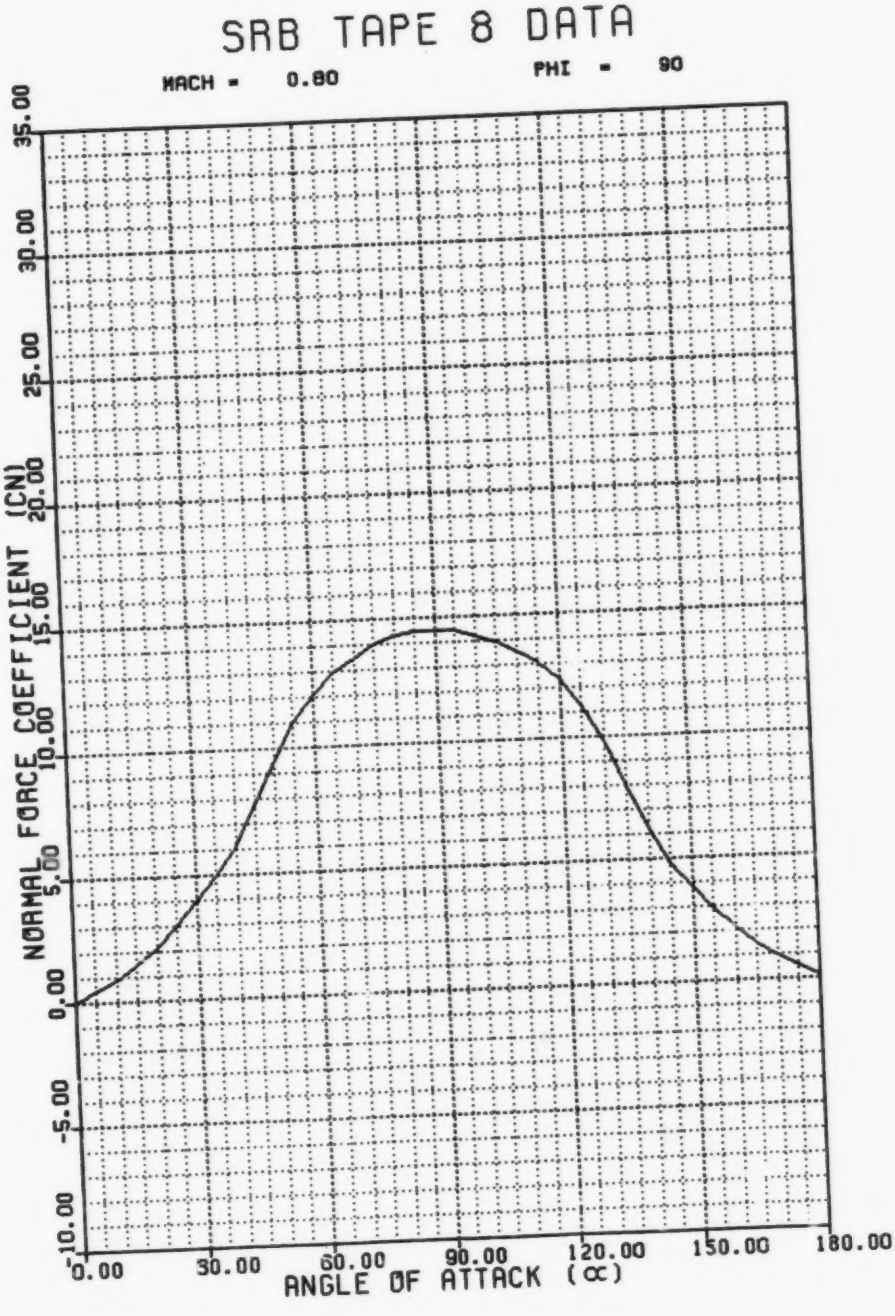
ANGLE OF ATTACK (α)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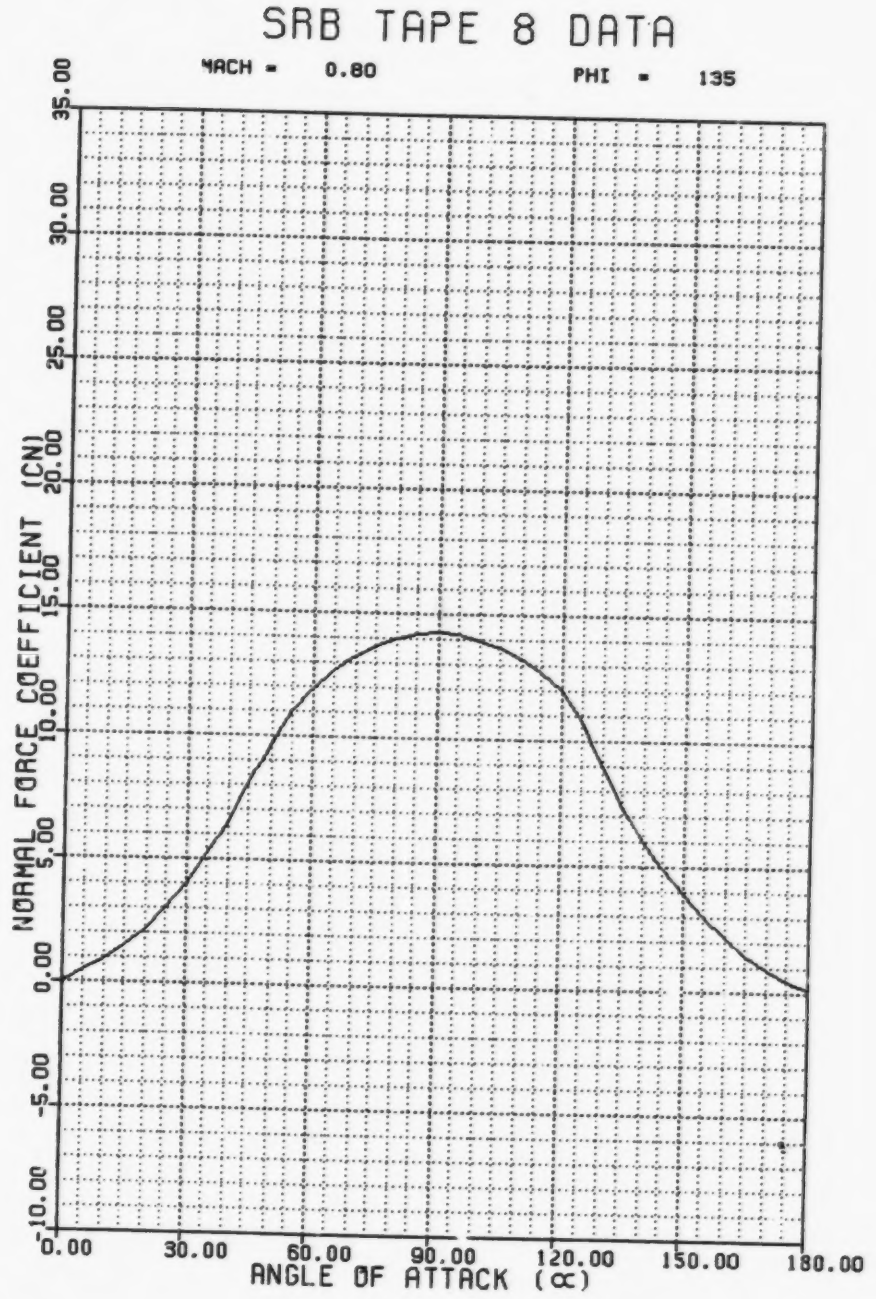
ANGLE OF ATTACK (α)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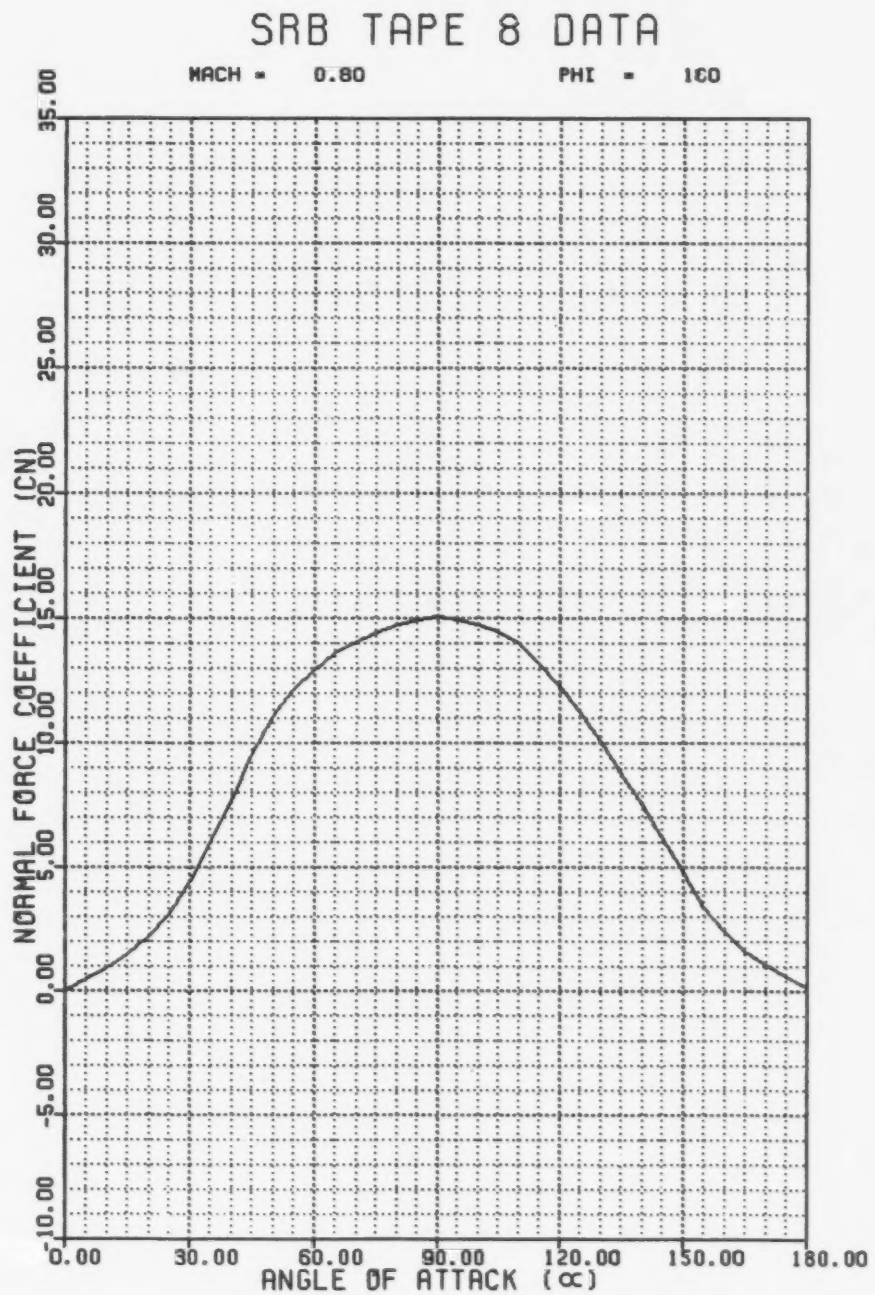
ANGLE OF ATTACK (α)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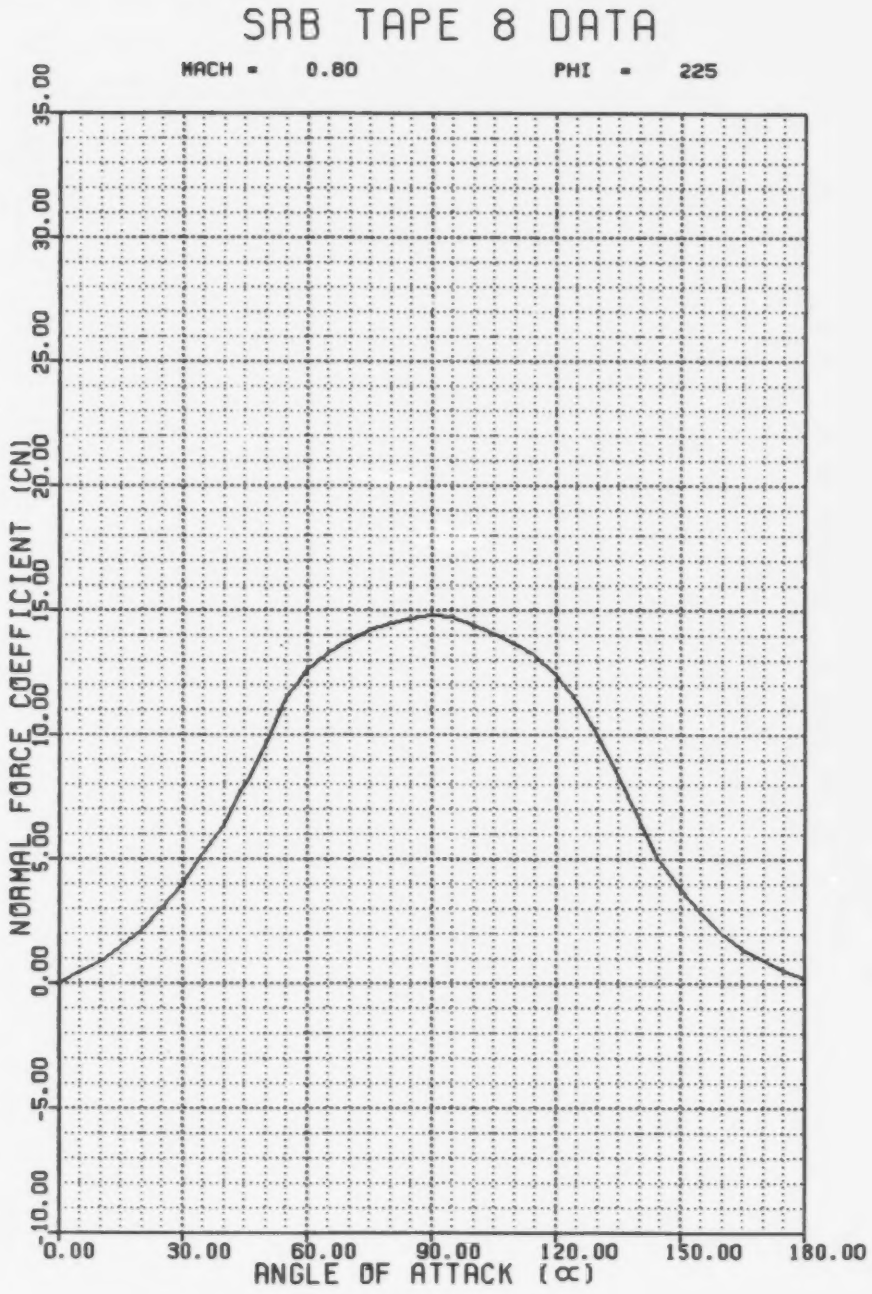
ANGLE OF ATTACK (α)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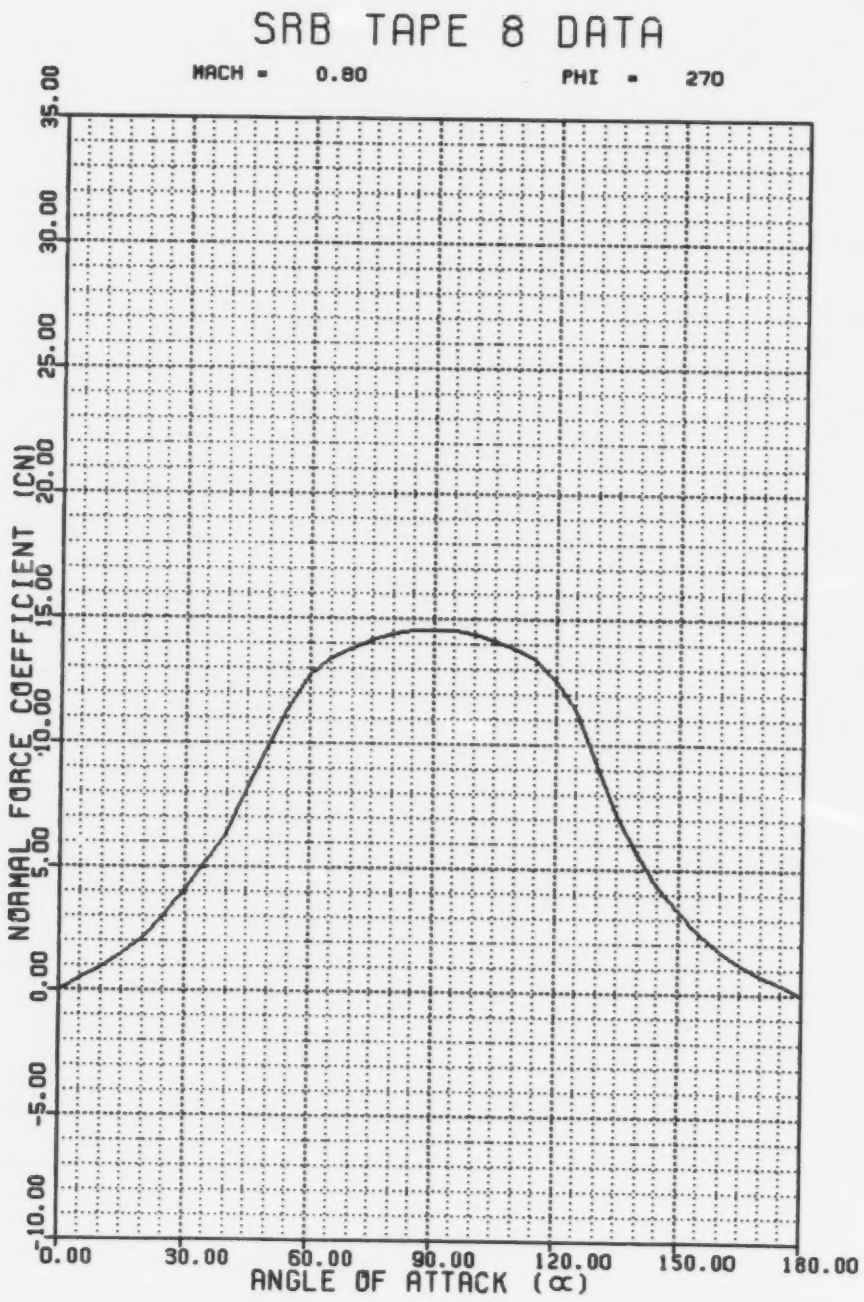
180.00
ANGLE OF ATTACK (α)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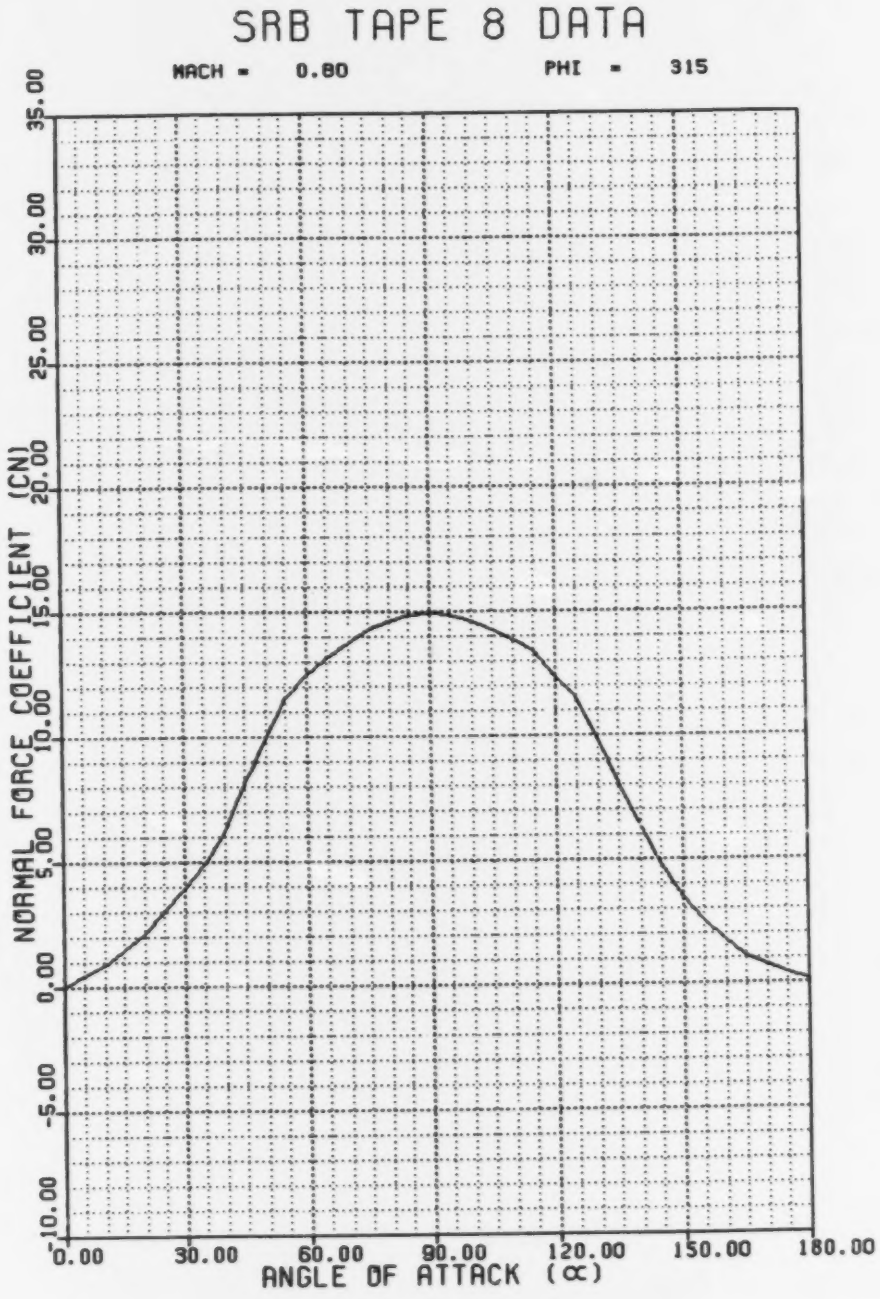
ANGLE OF ATTACK (α)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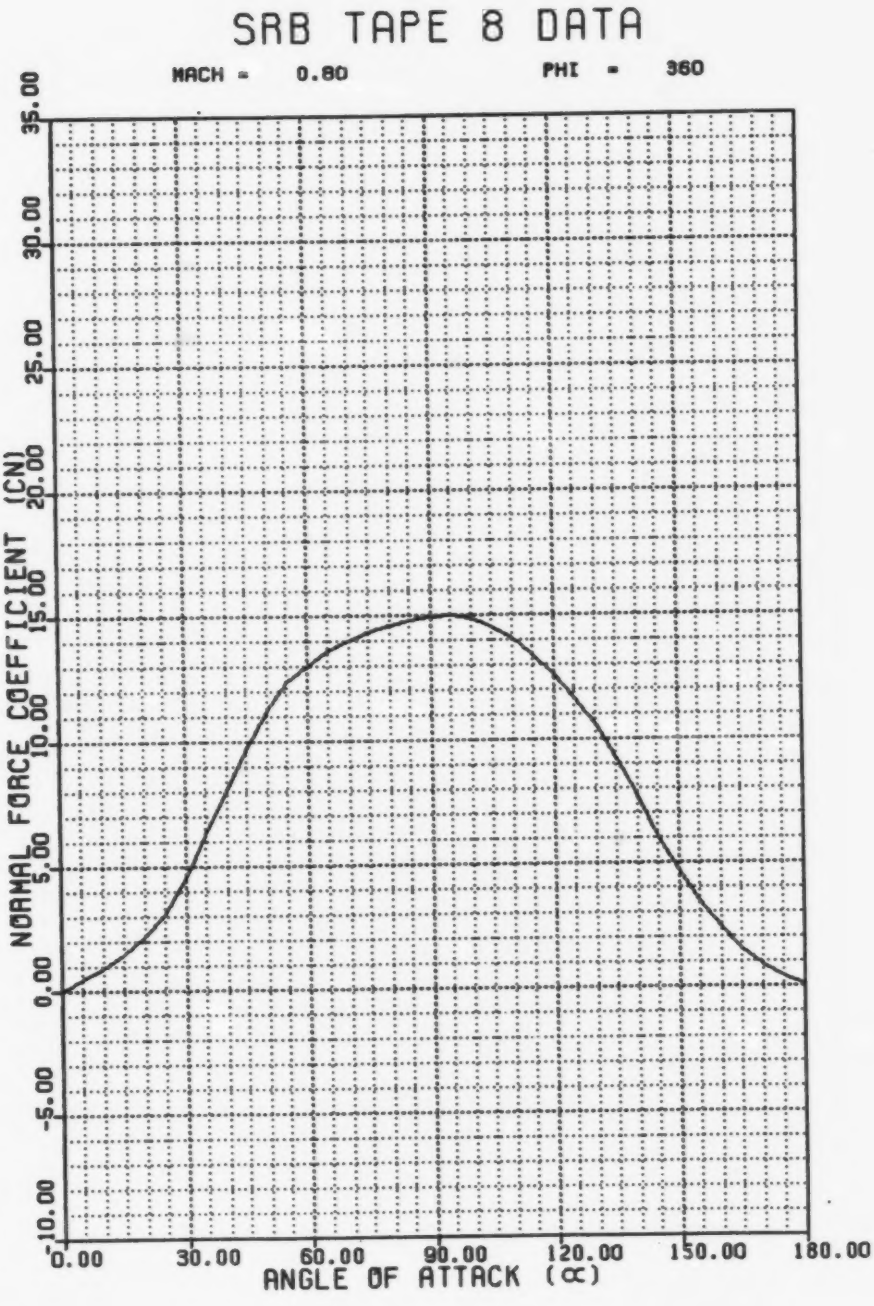
ANGLE OF ATTACK (α)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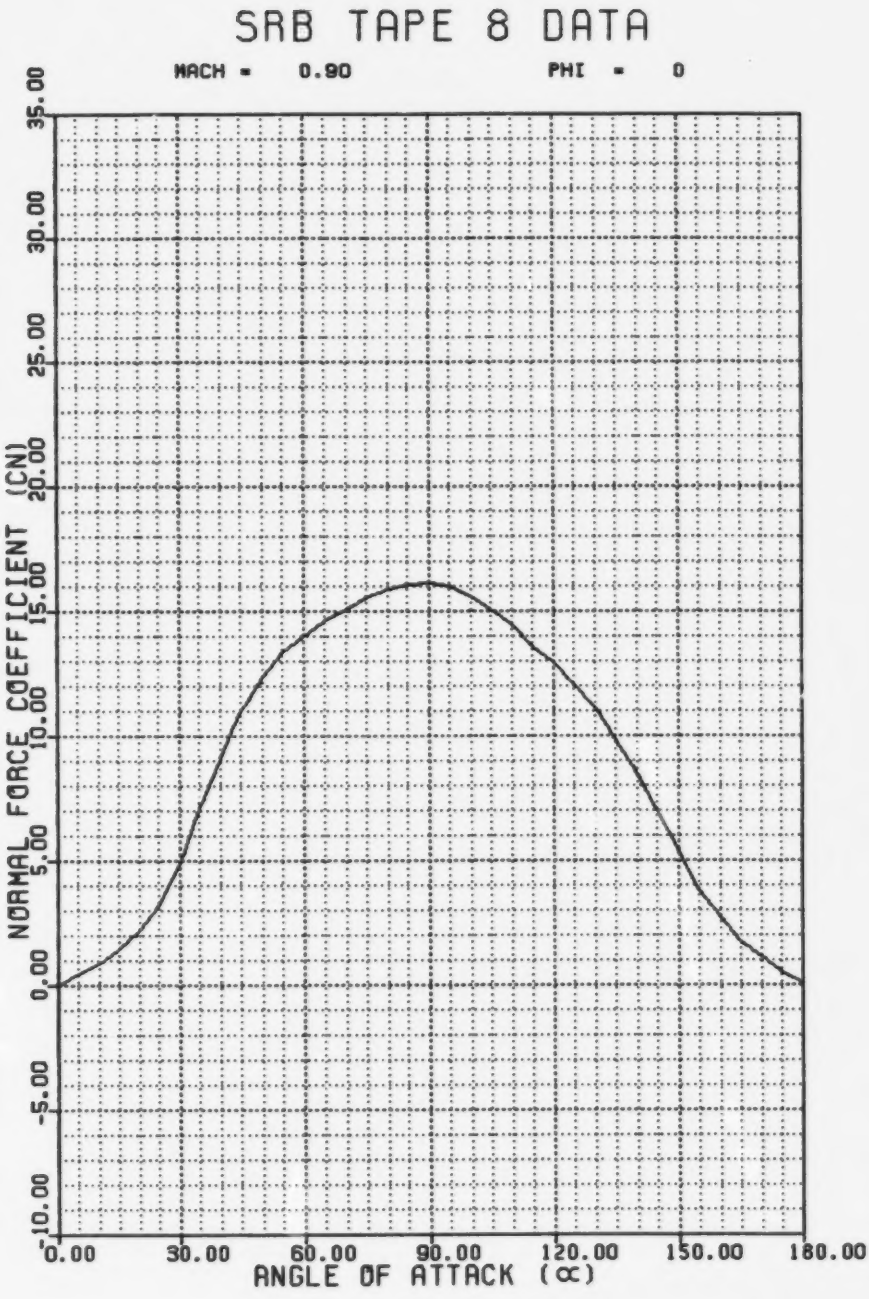
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
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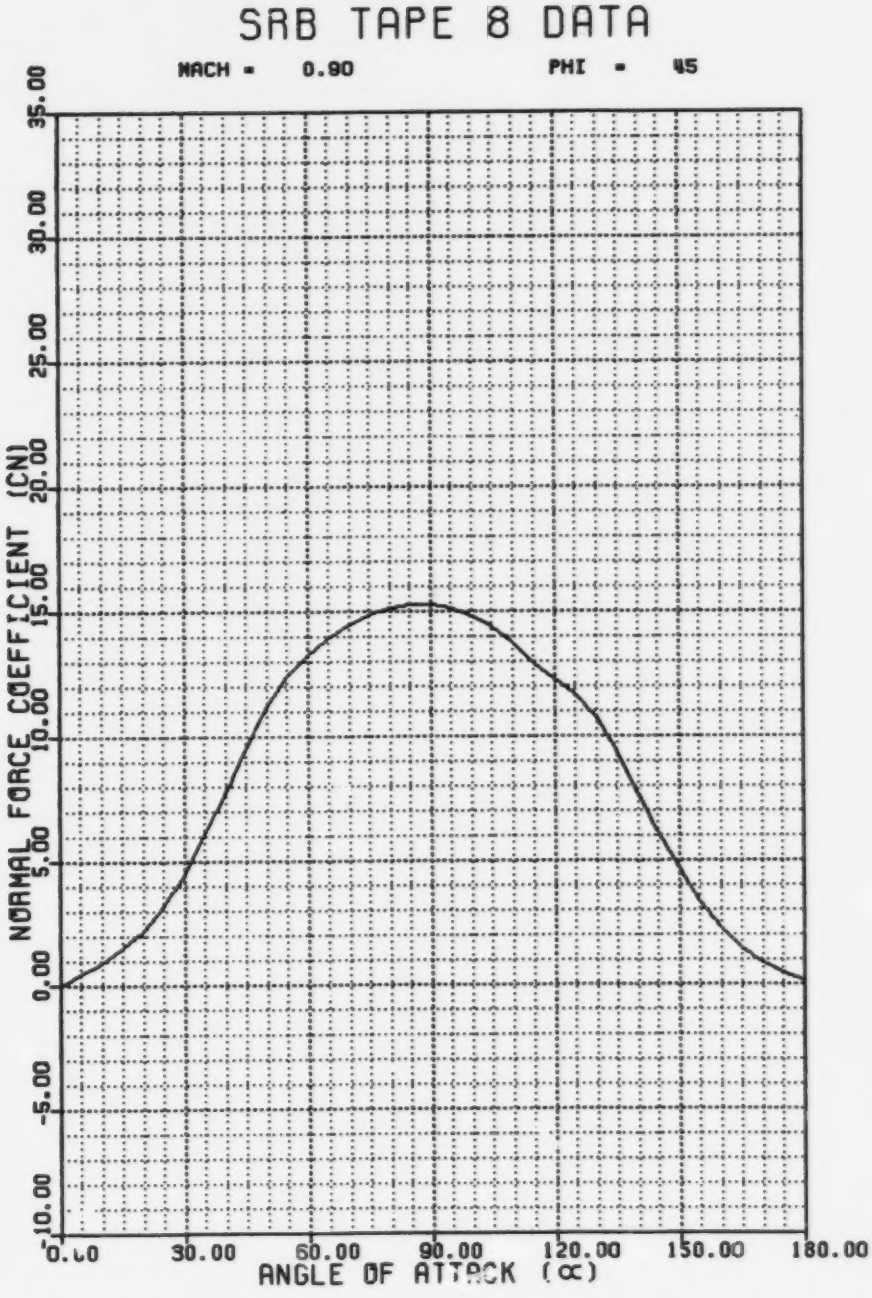
ANGLE OF ATTACK (α)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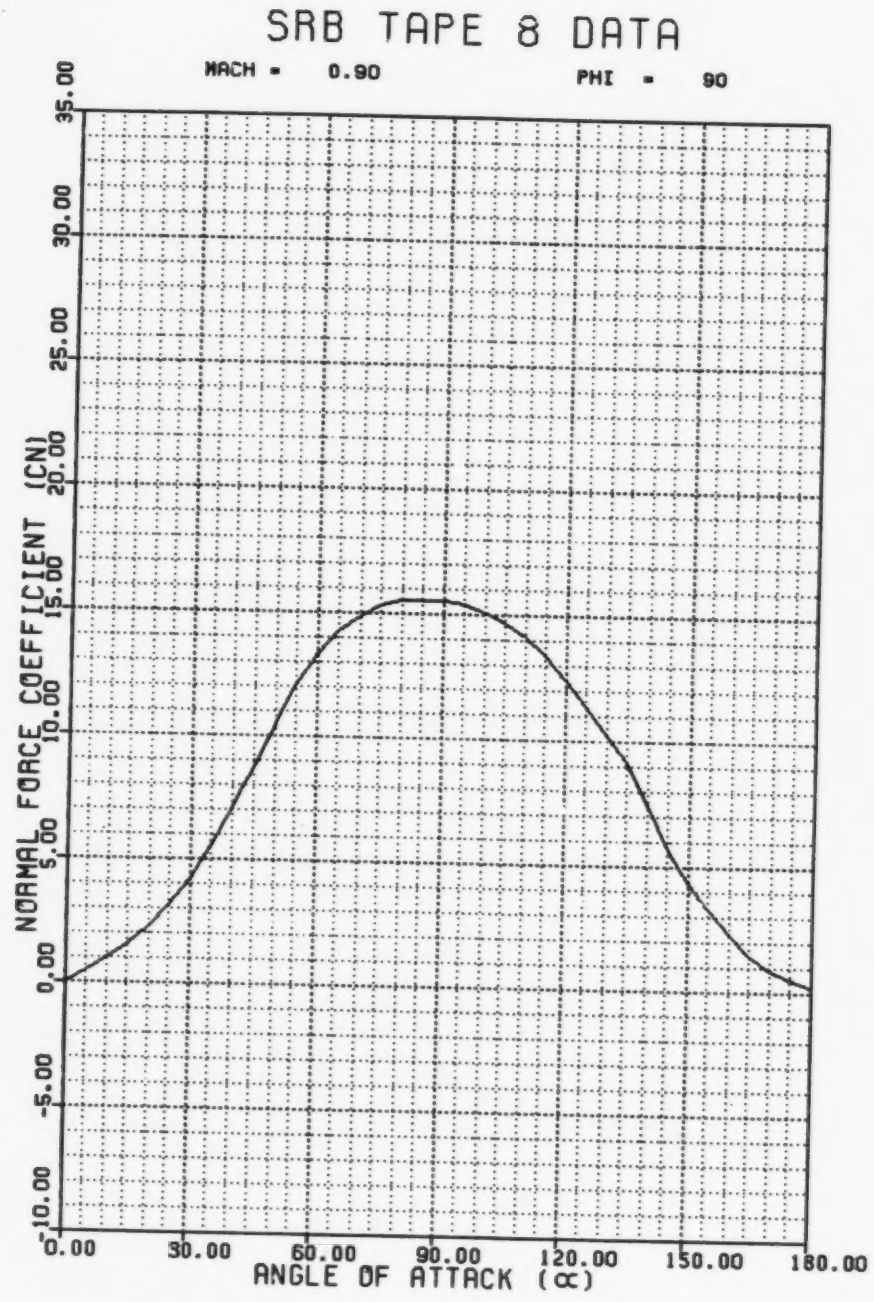
ANGLE OF ATTACK (α)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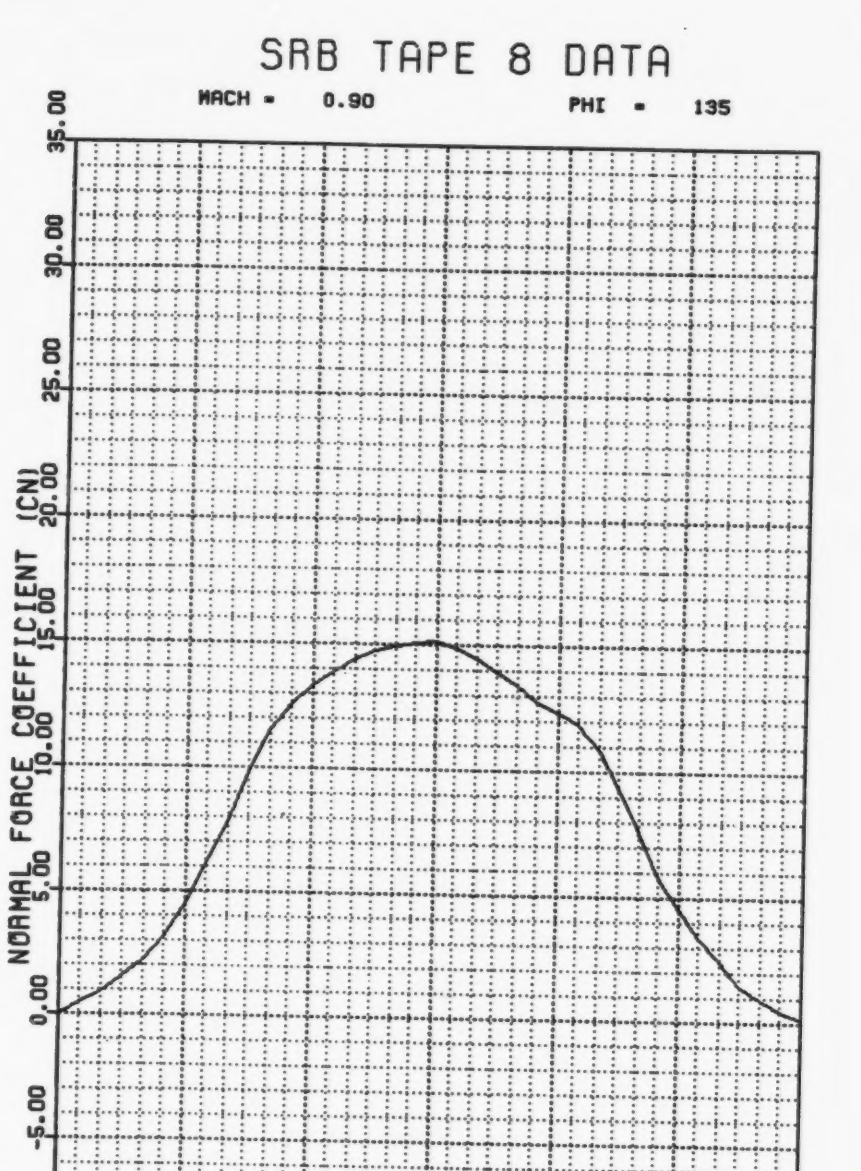
ANGLE OF ATTACK (α)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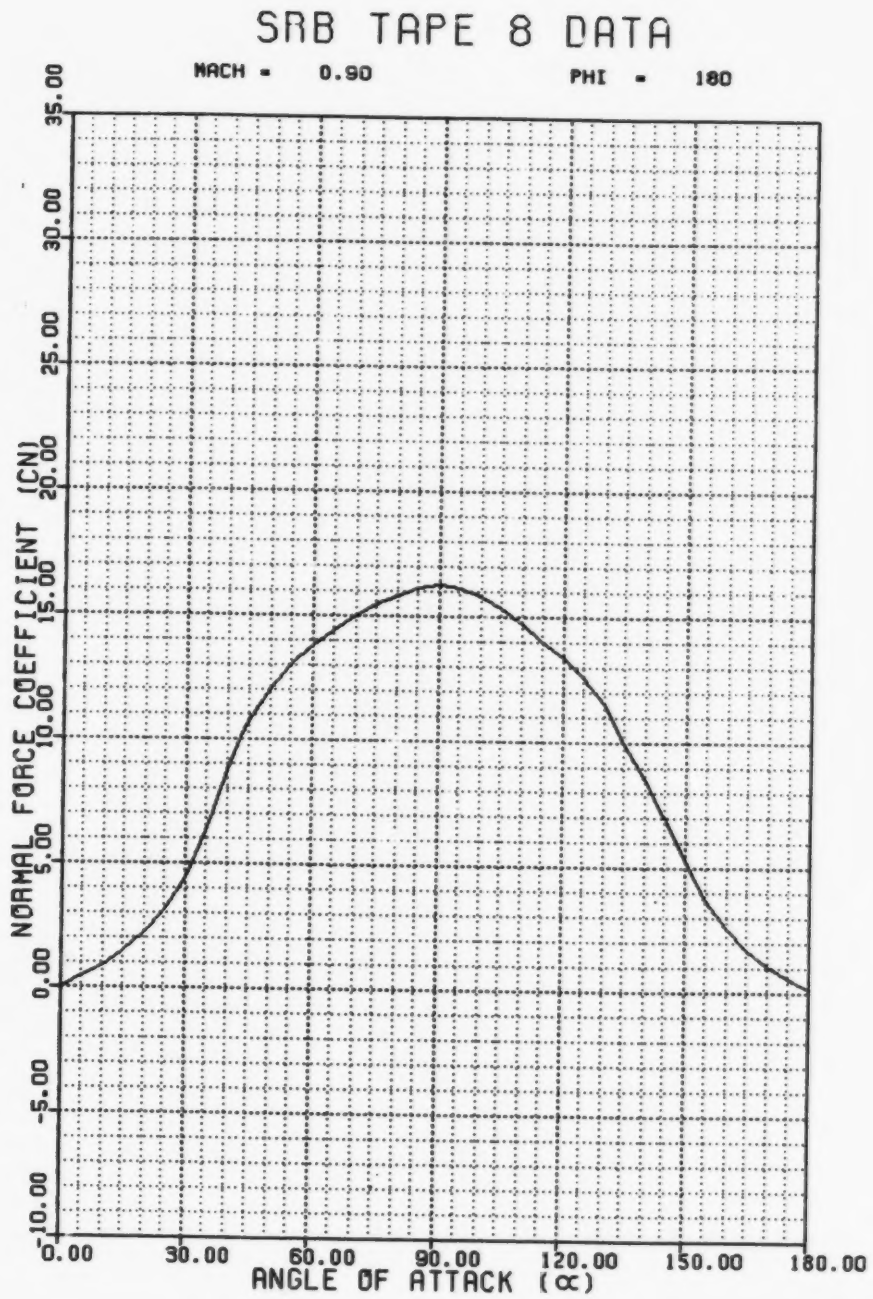
ANGLE OF ATTACK (α)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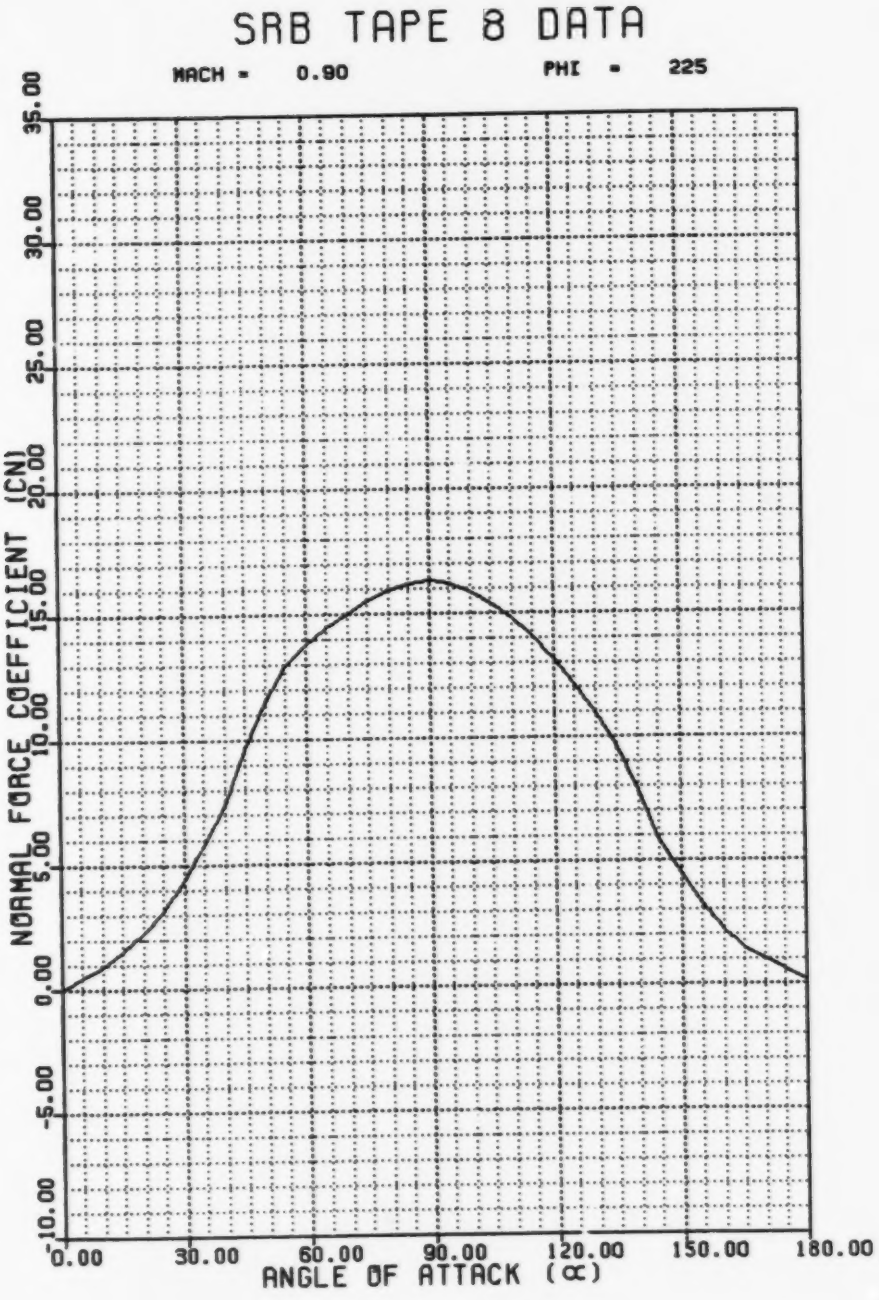
ANGLE OF ATTACK (α)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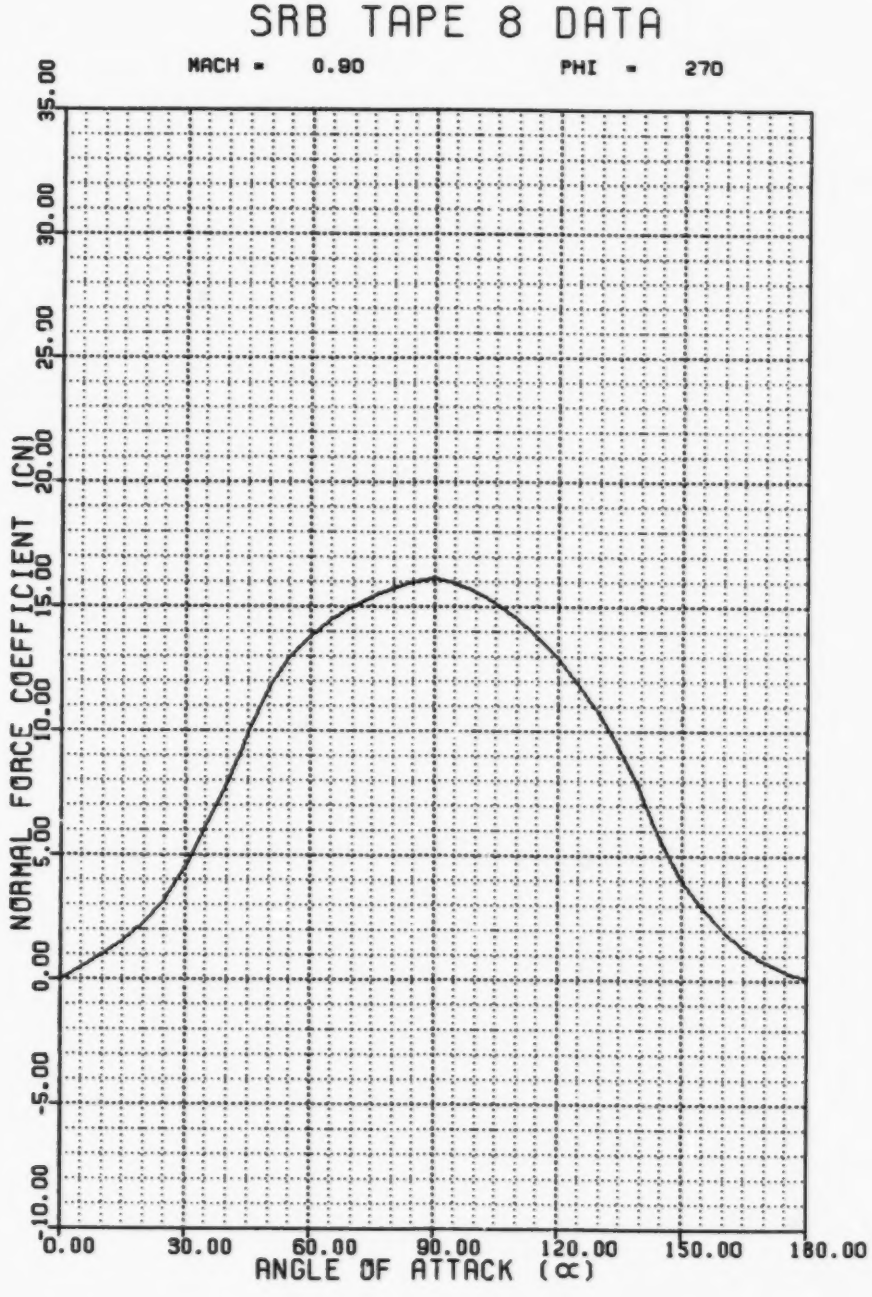
ANGLE OF ATTACK (α)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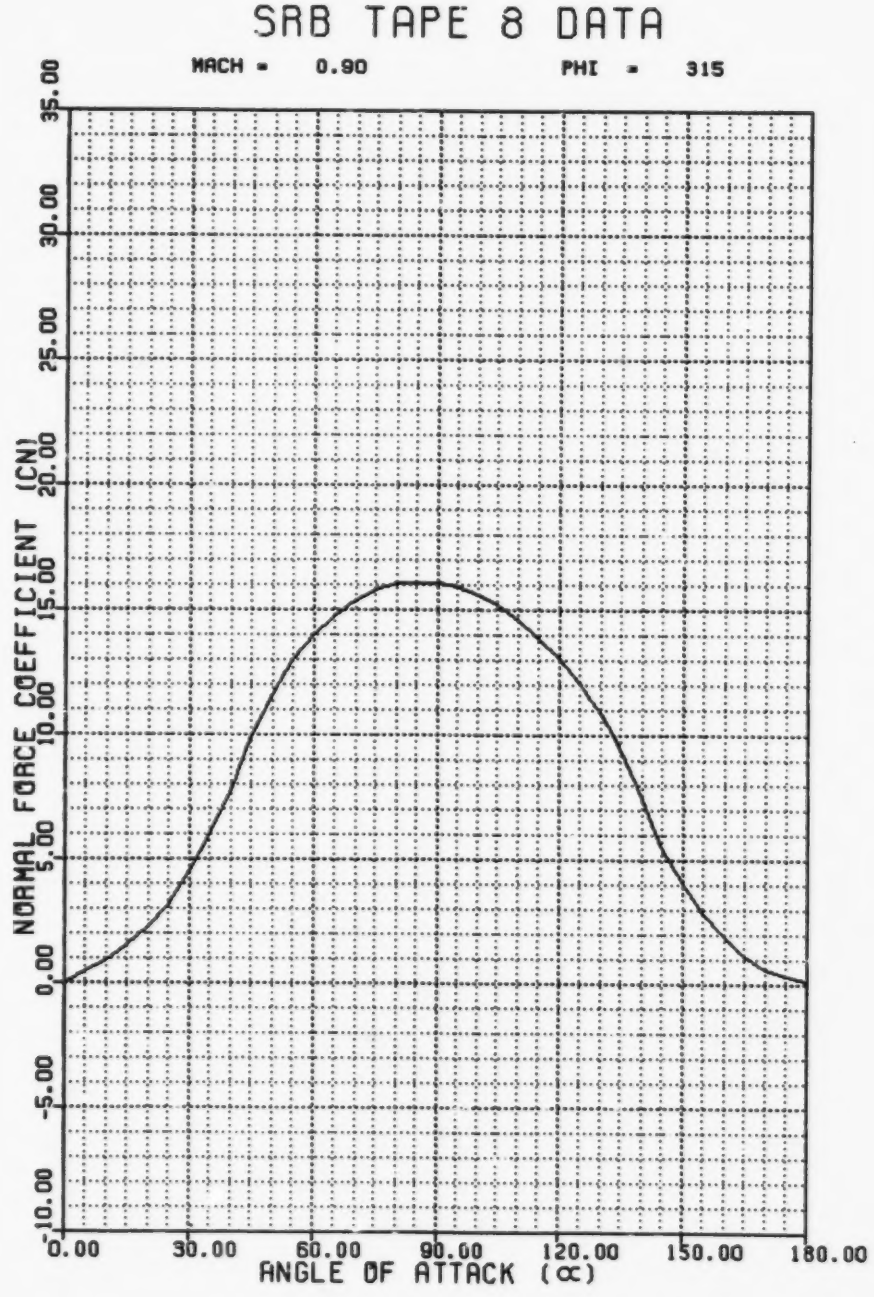
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
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60.00
90.00
120.00
150.00
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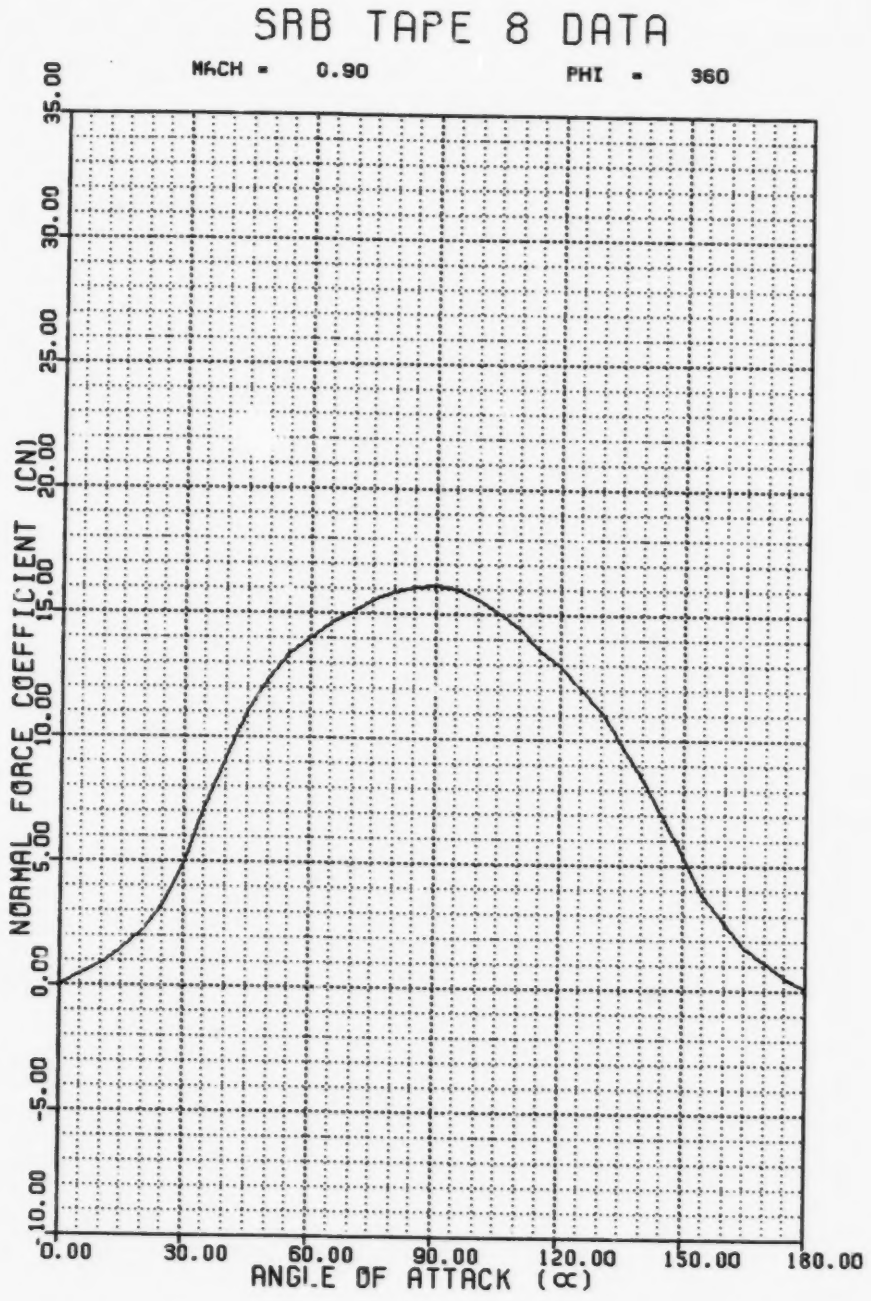
ANGLE OF ATTACK (α)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-10.00
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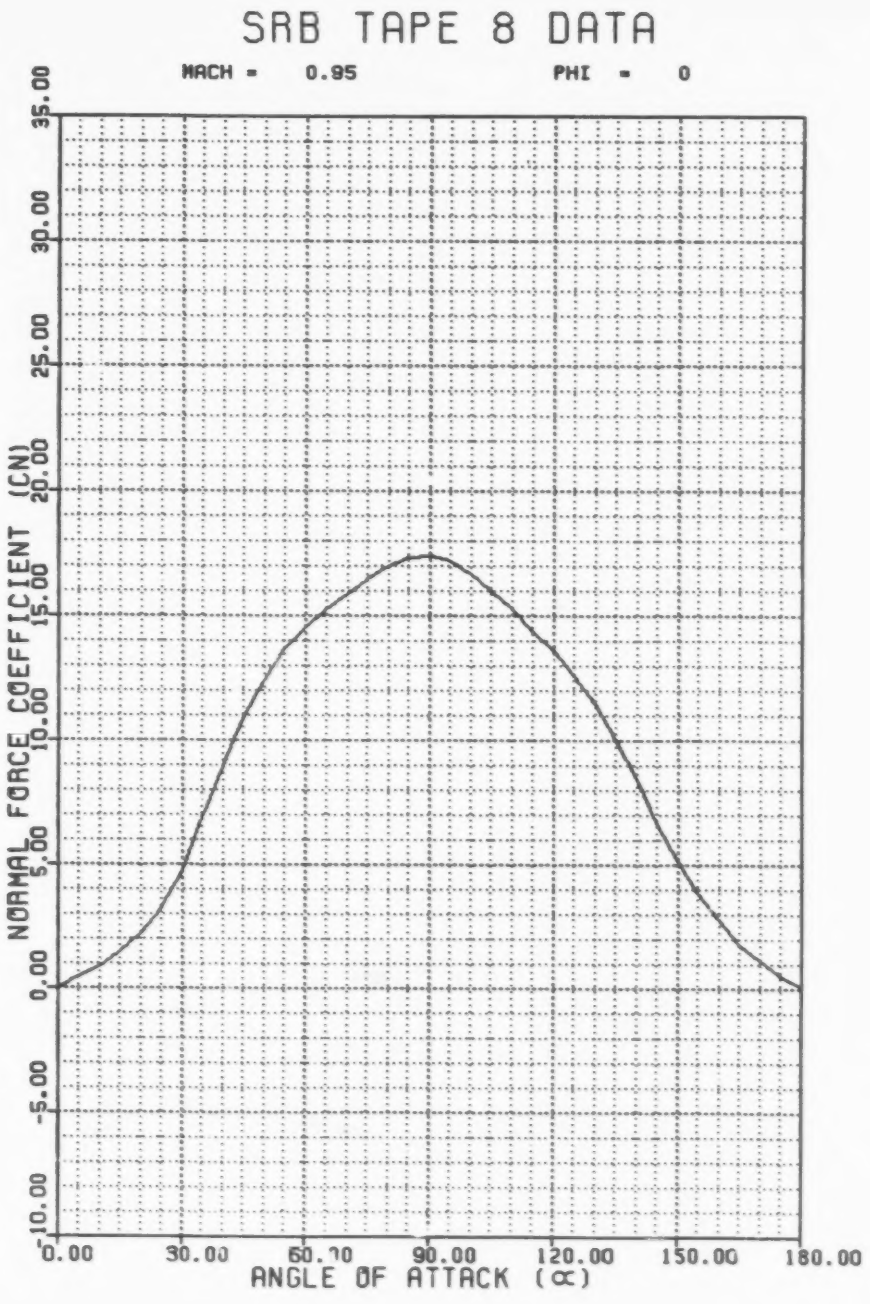
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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10.00
5.00
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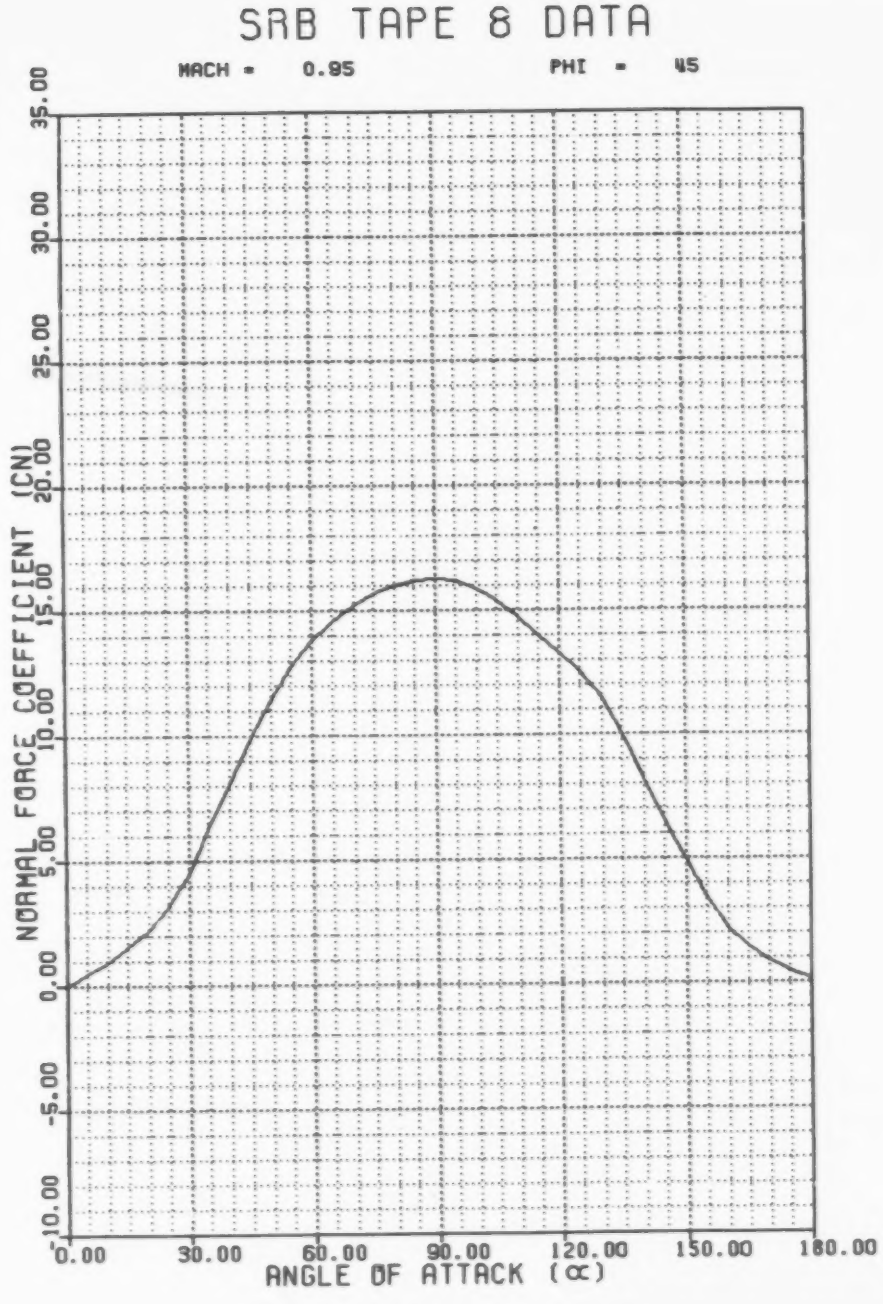
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.95
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0.00
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90.00
120.00
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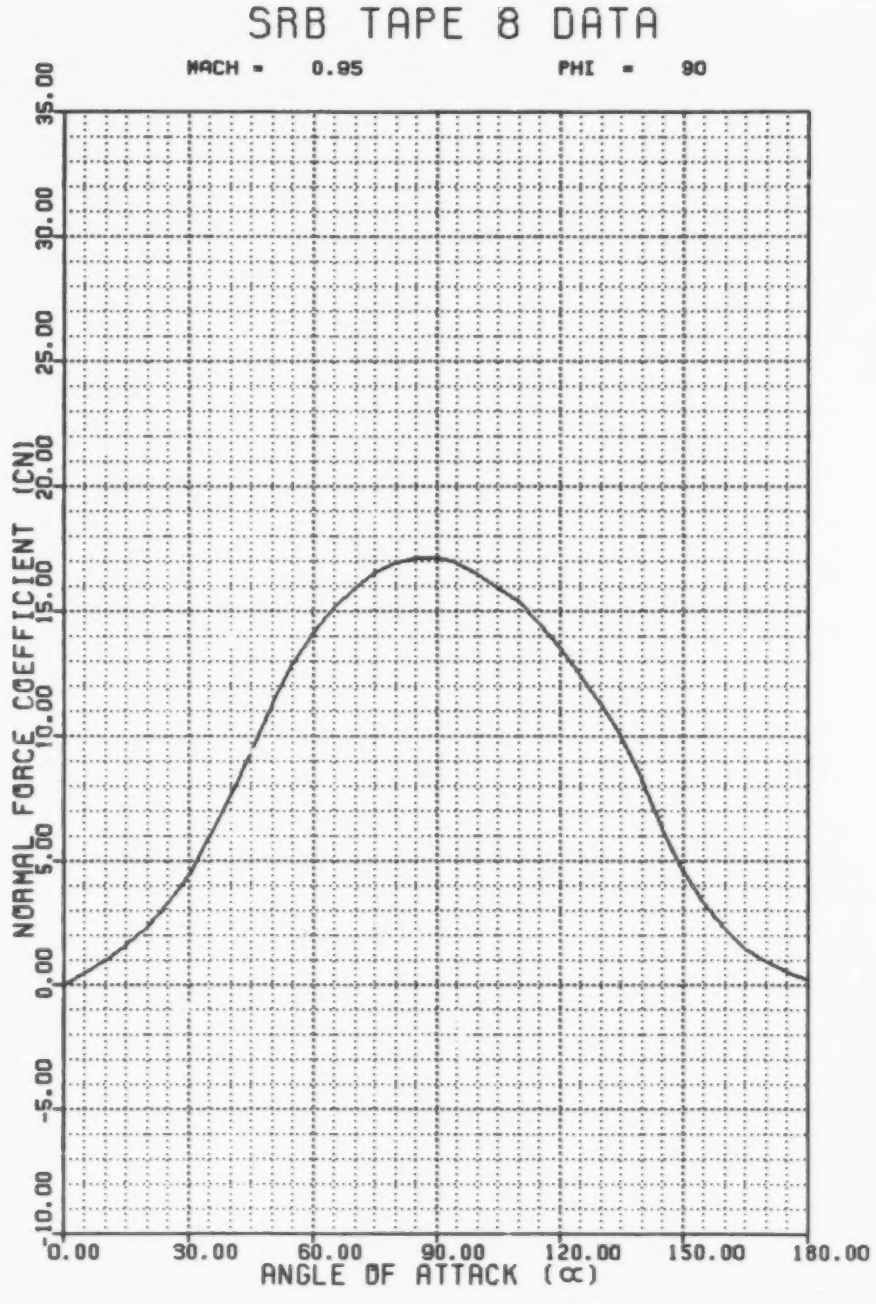
ANGLE OF ATTACK (α)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60.00
90.00
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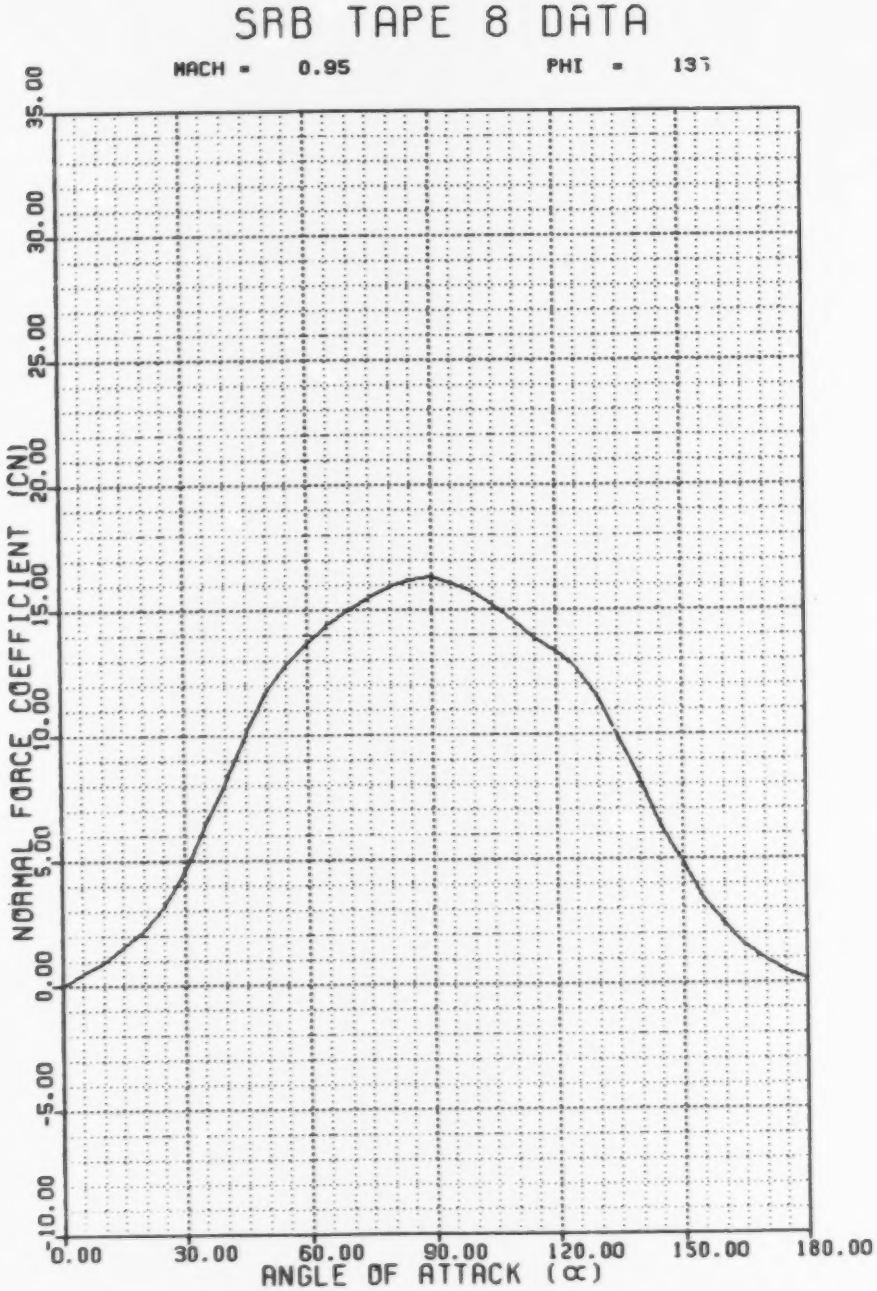
ANGLE OF ATTACK (α)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60.00
90.00
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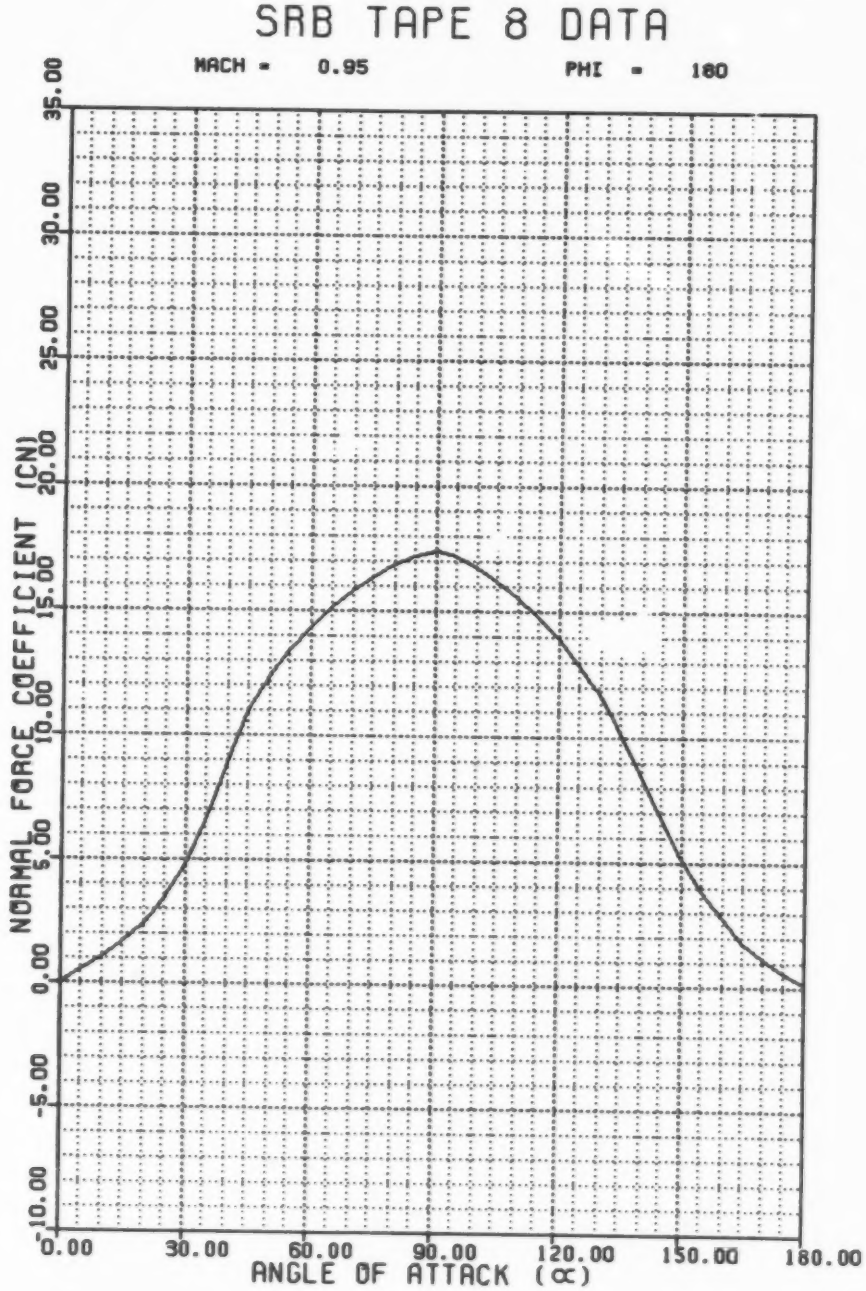
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
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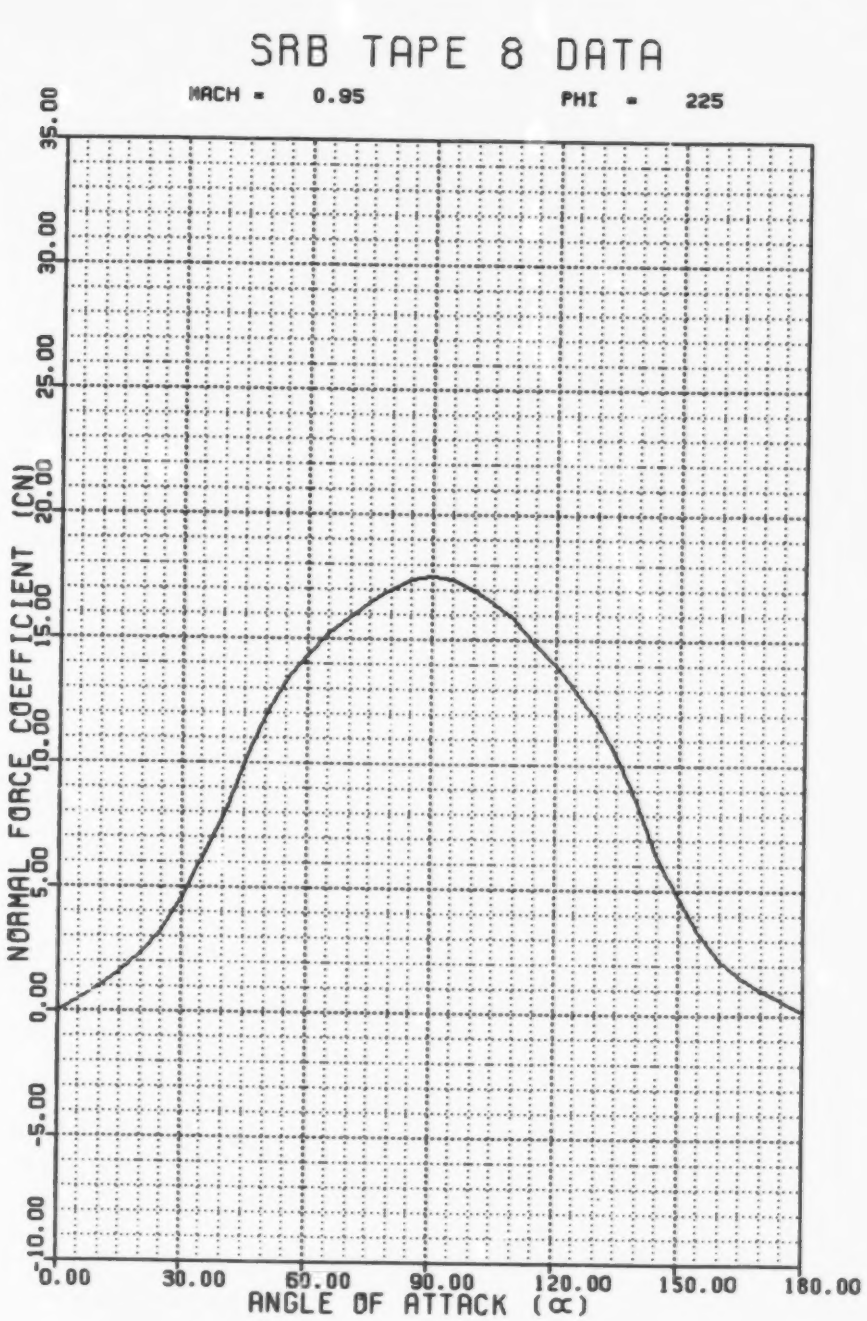
ANGLE OF ATTACK (α)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60.00
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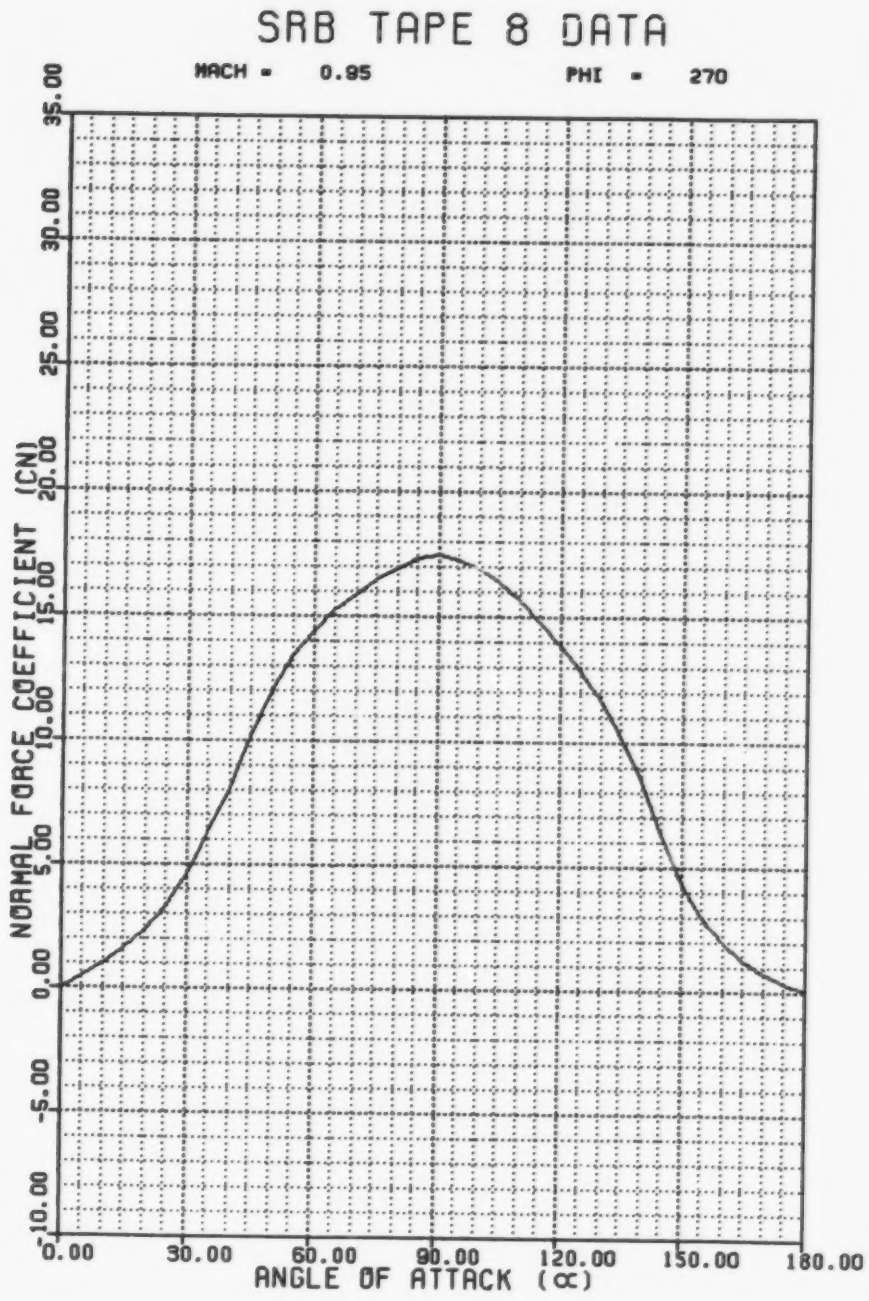
180.00
ANGLE OF ATTACK (α)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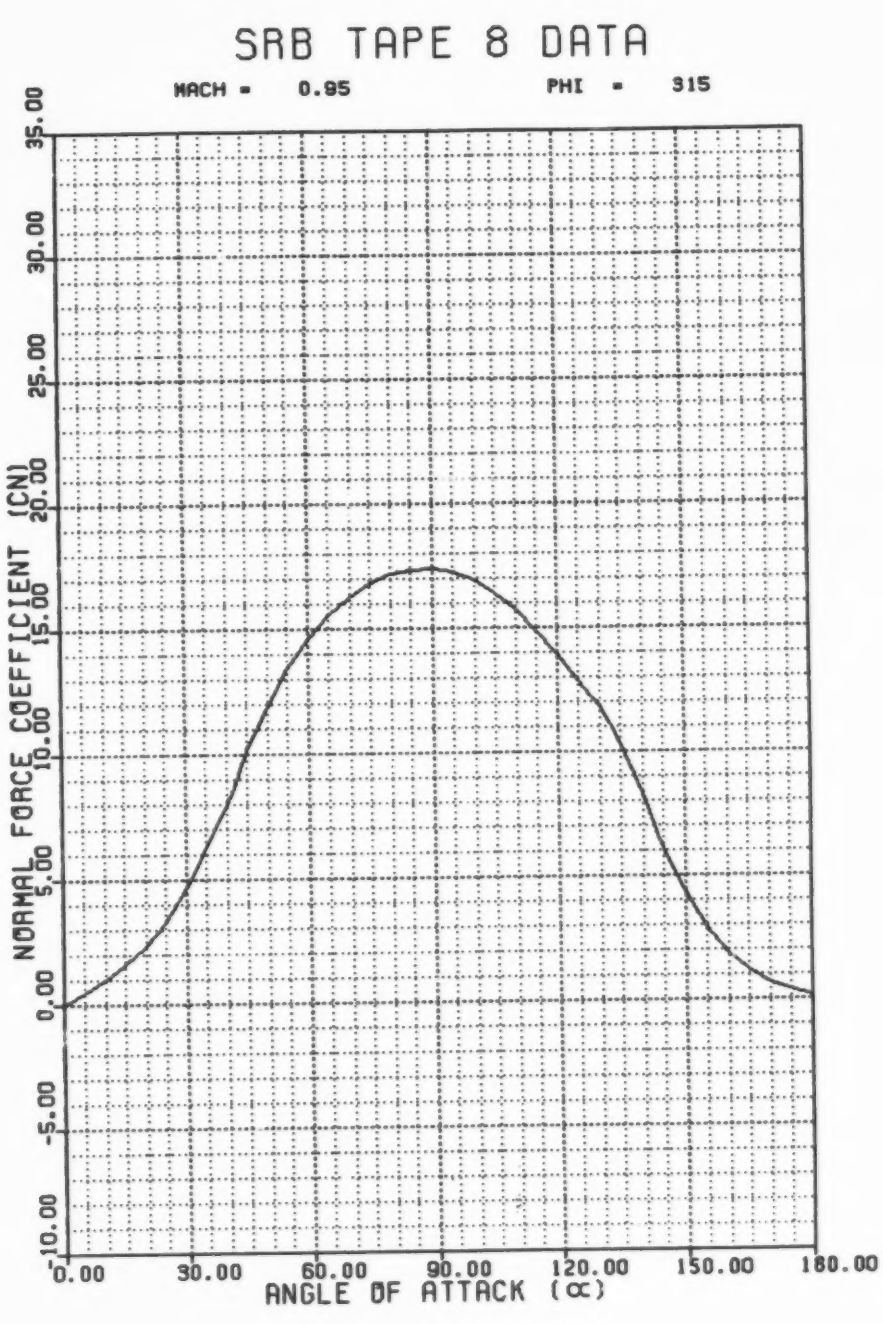
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
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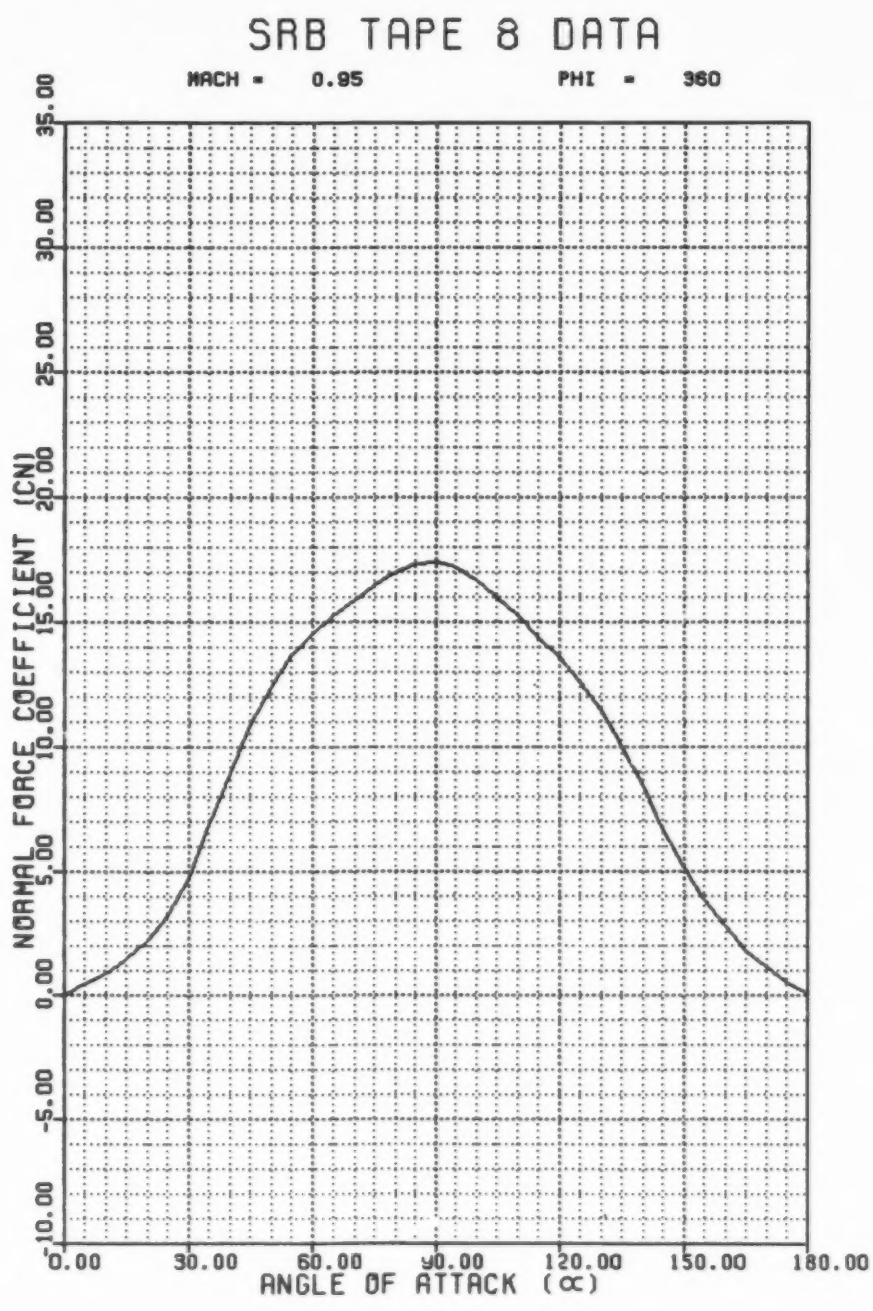
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
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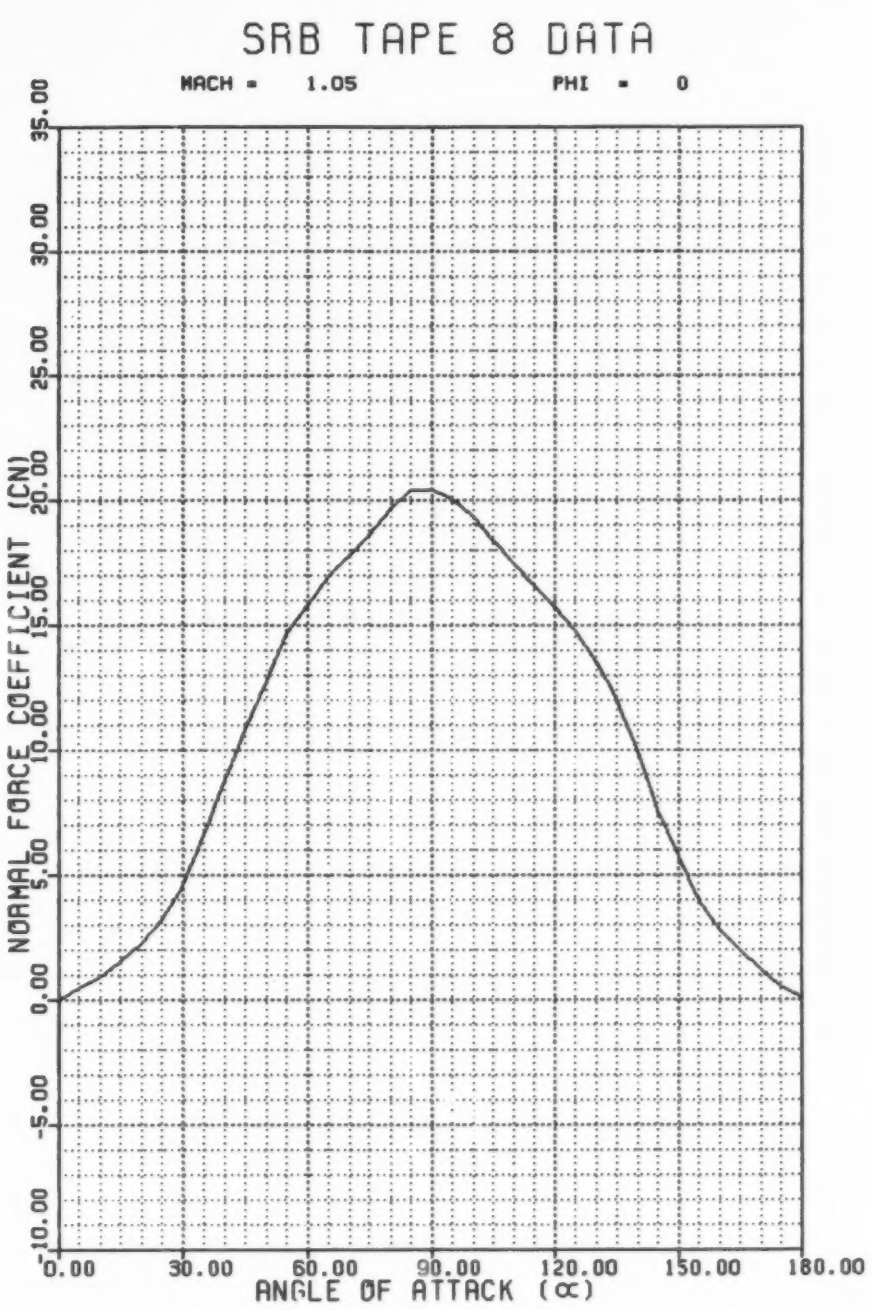
ANGLE OF ATTACK (α)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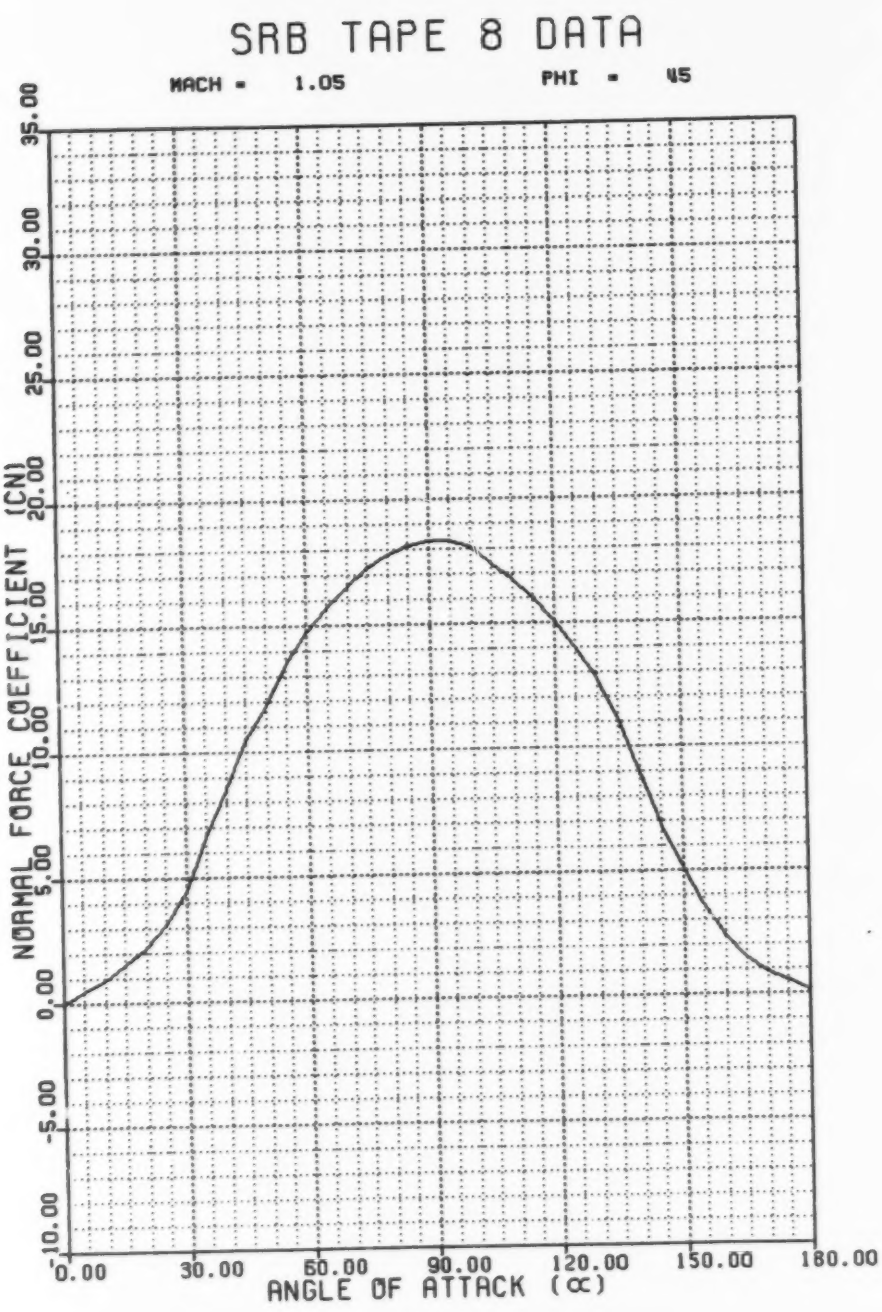
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
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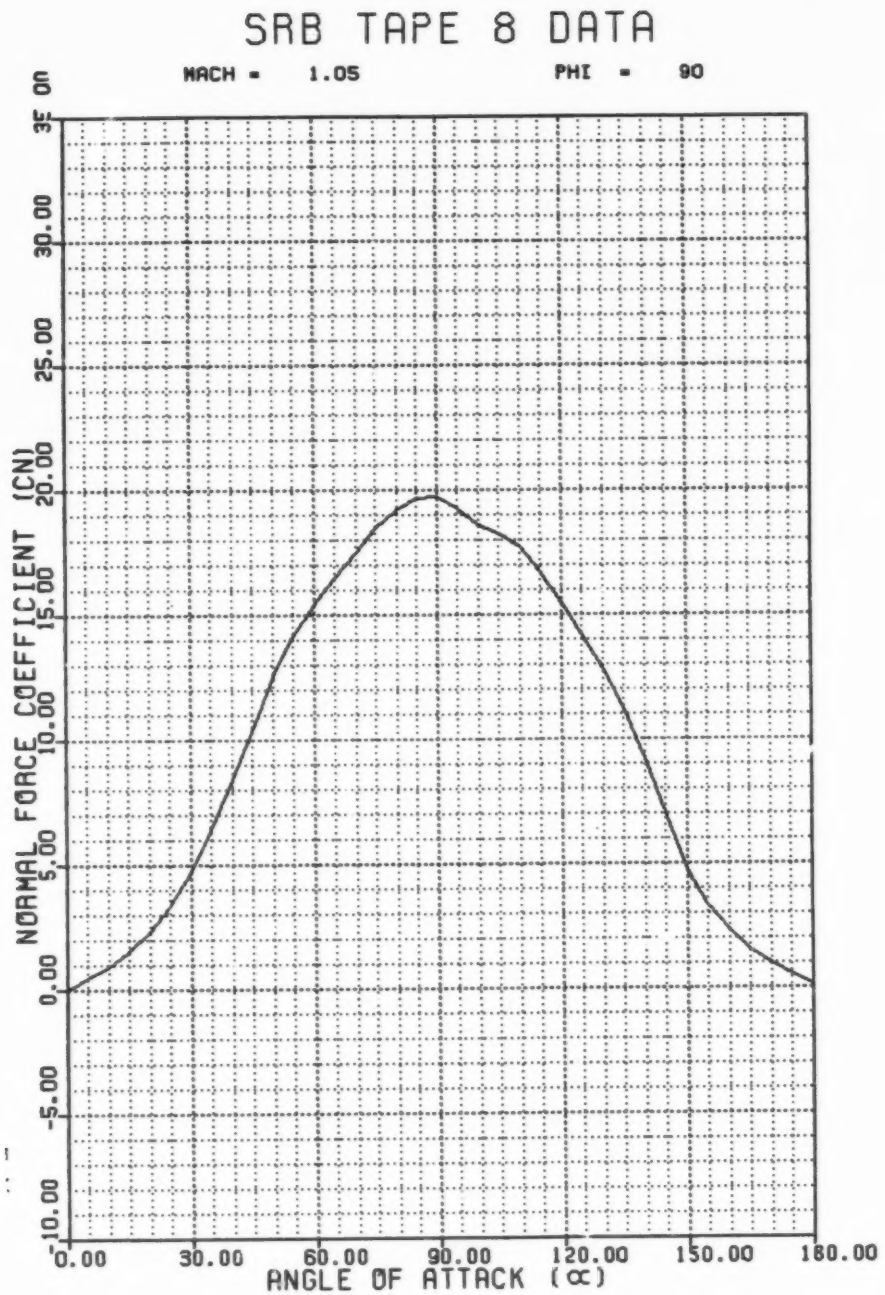
ANGLE OF ATTACK (α)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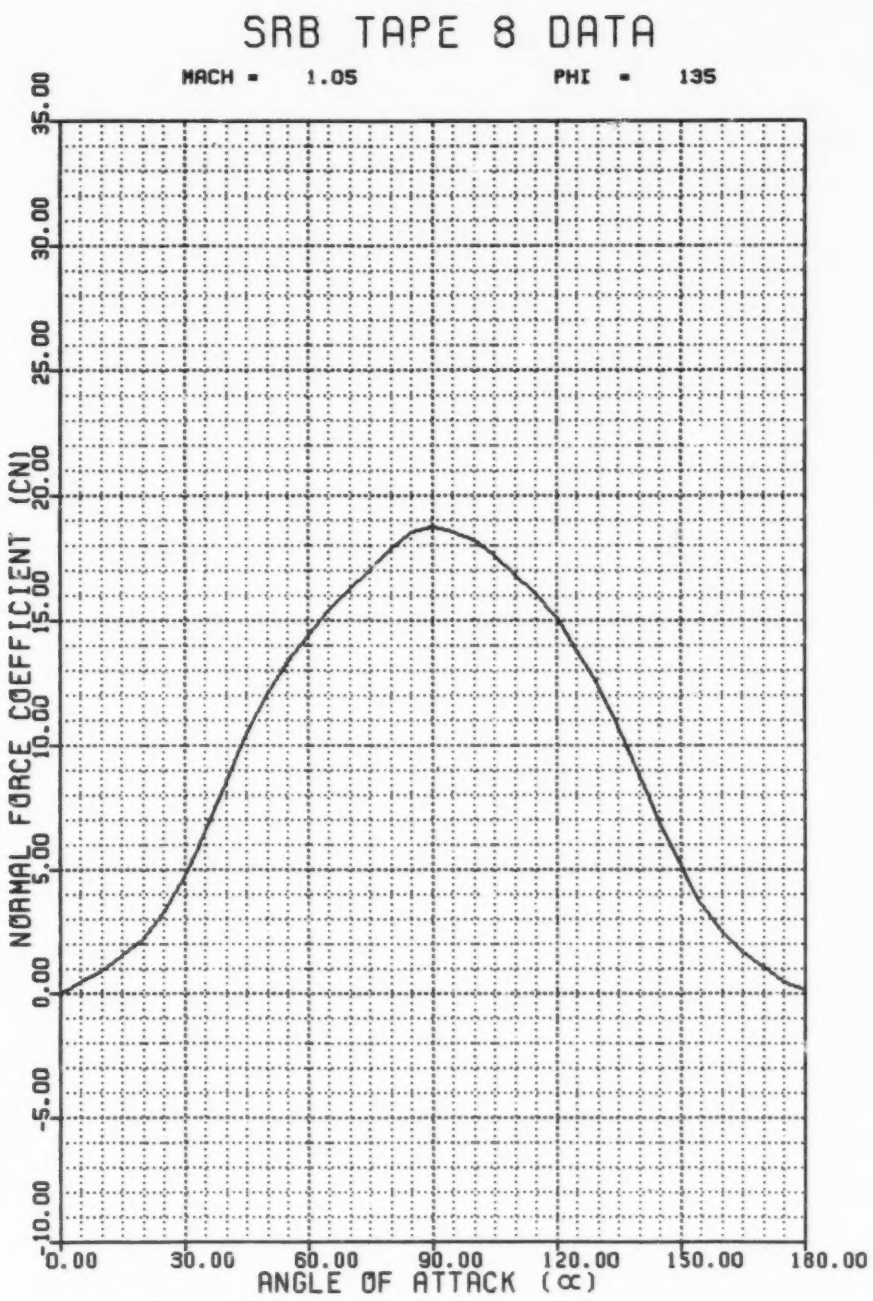
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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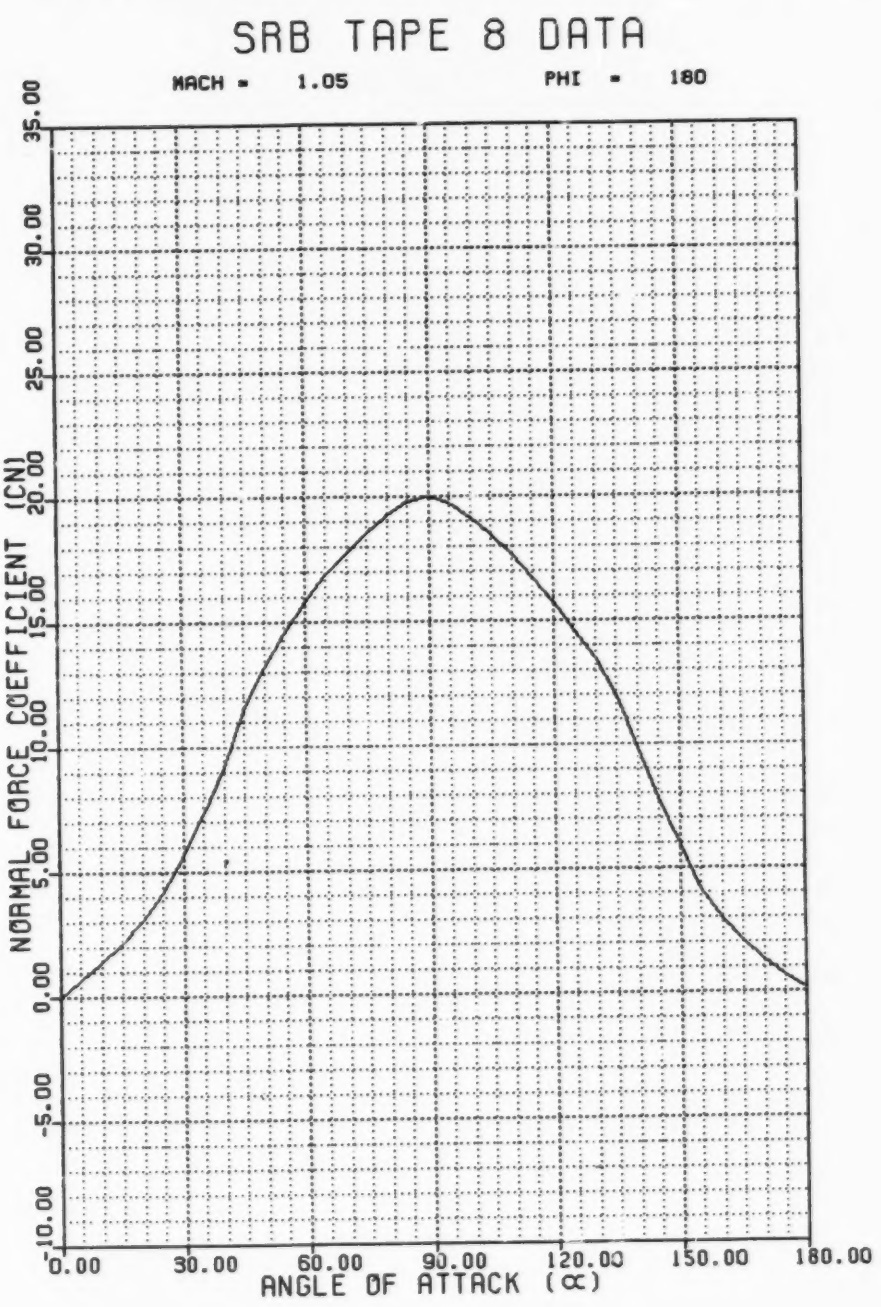
ANGLE OF ATTACK (α)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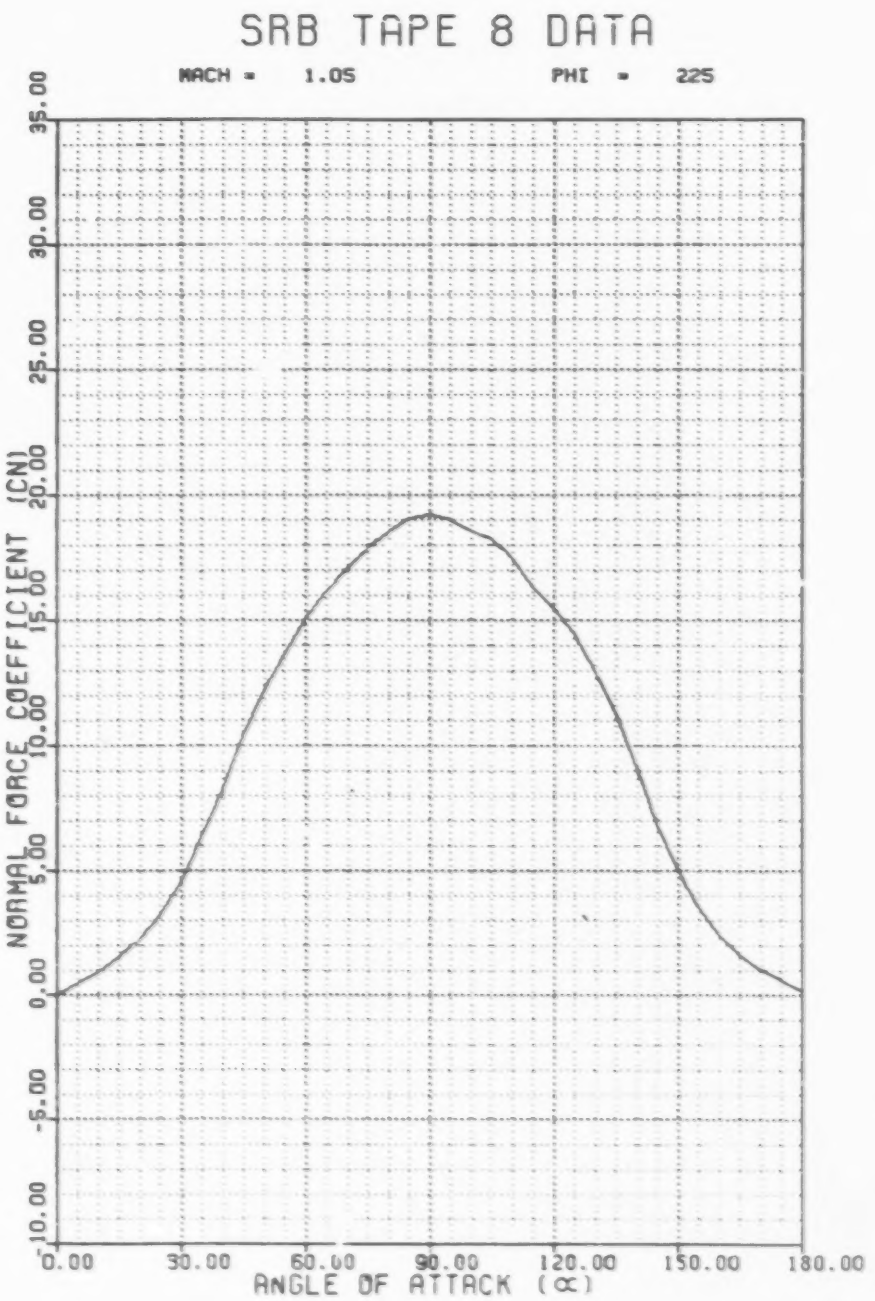
ANGLE OF ATTACK (α)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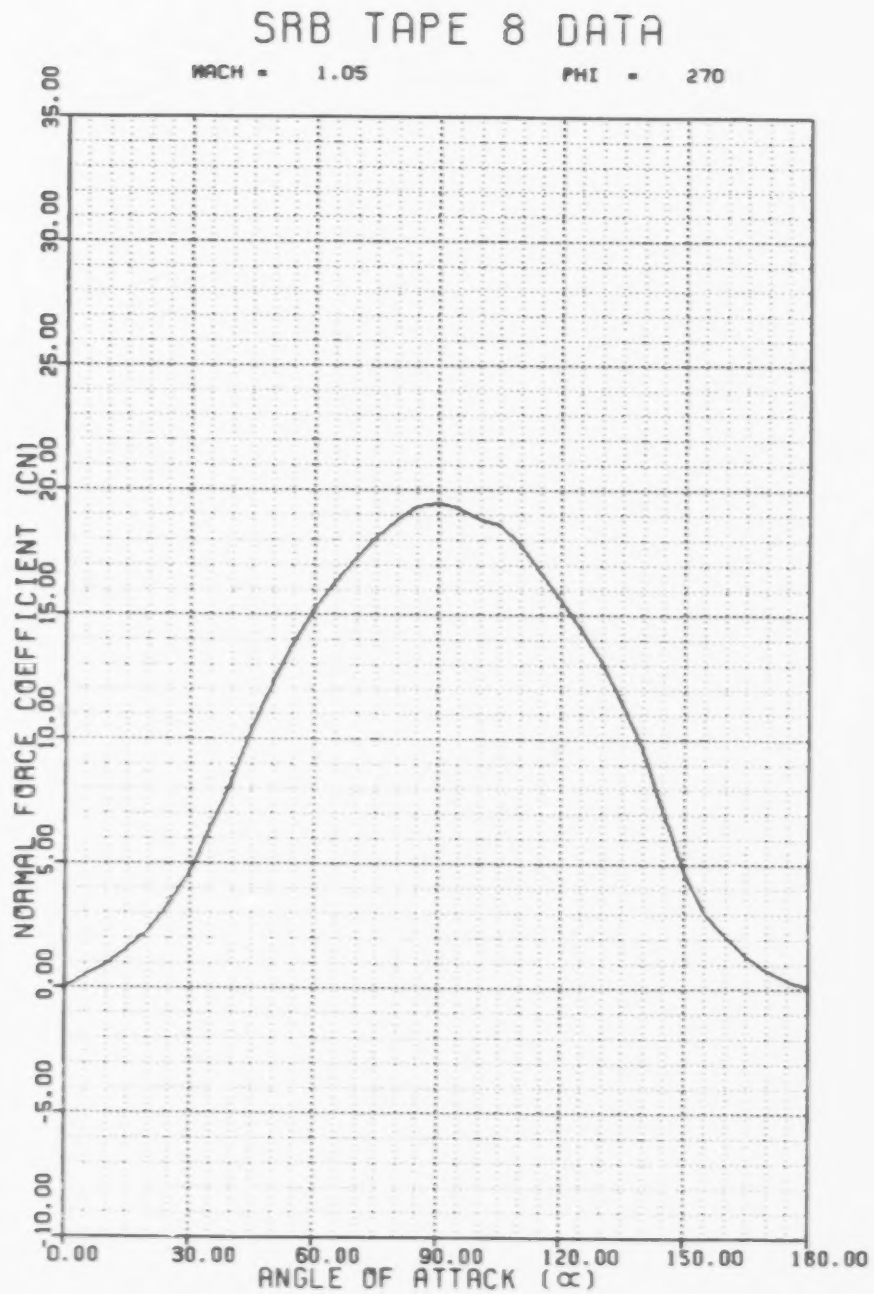
ANGLE OF ATTACK (α)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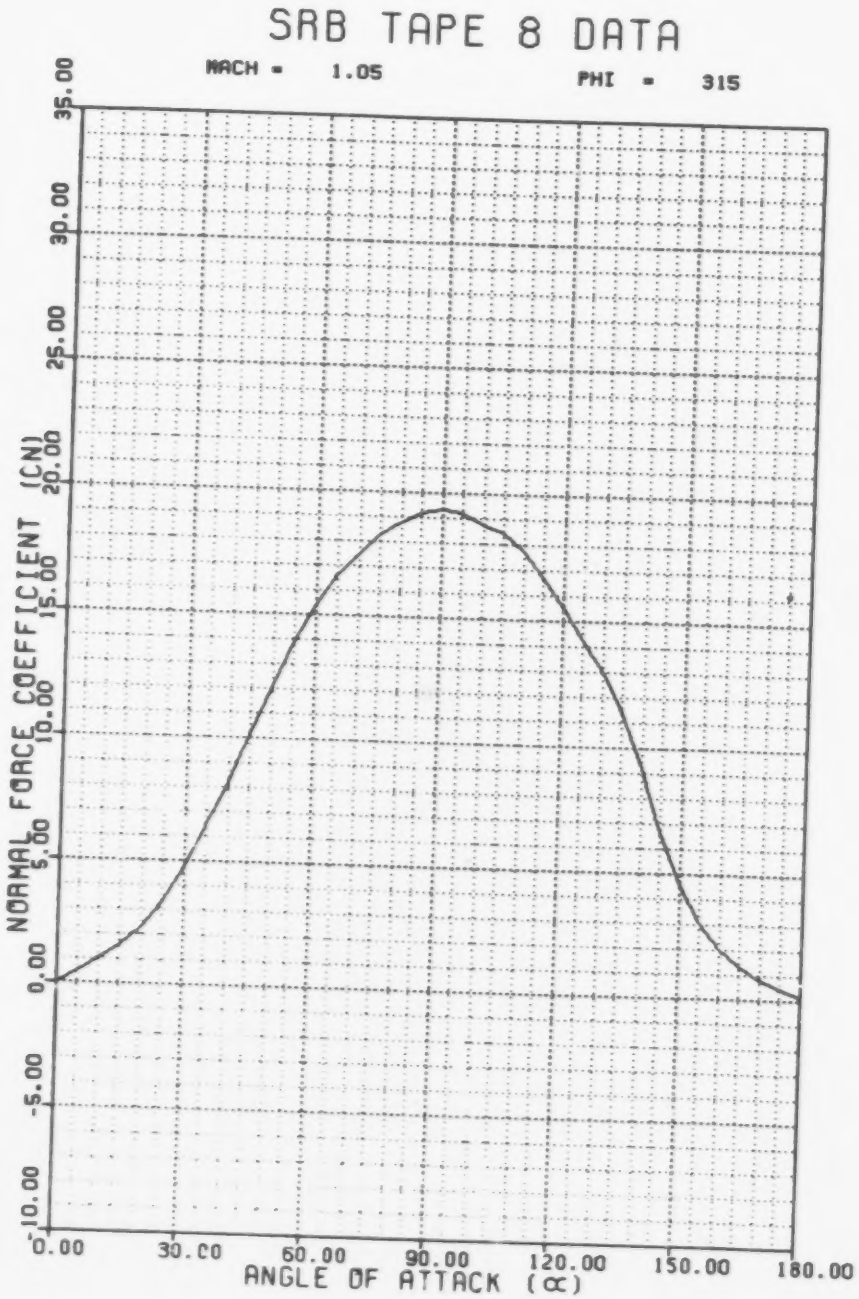
ANGLE OF ATTACK (α)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60.00
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120.00
150.00
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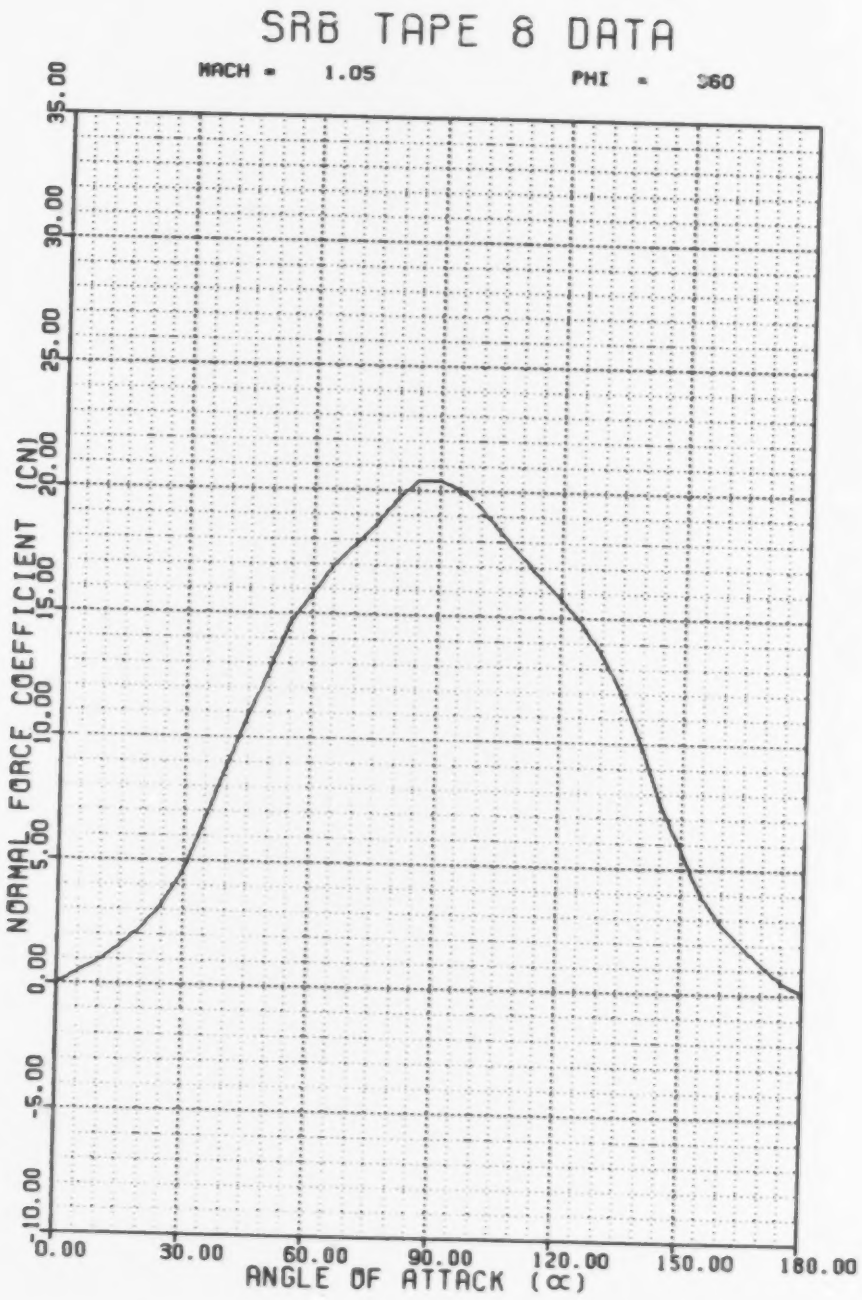
ANGLE OF ATTACK (α)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PHI = 360
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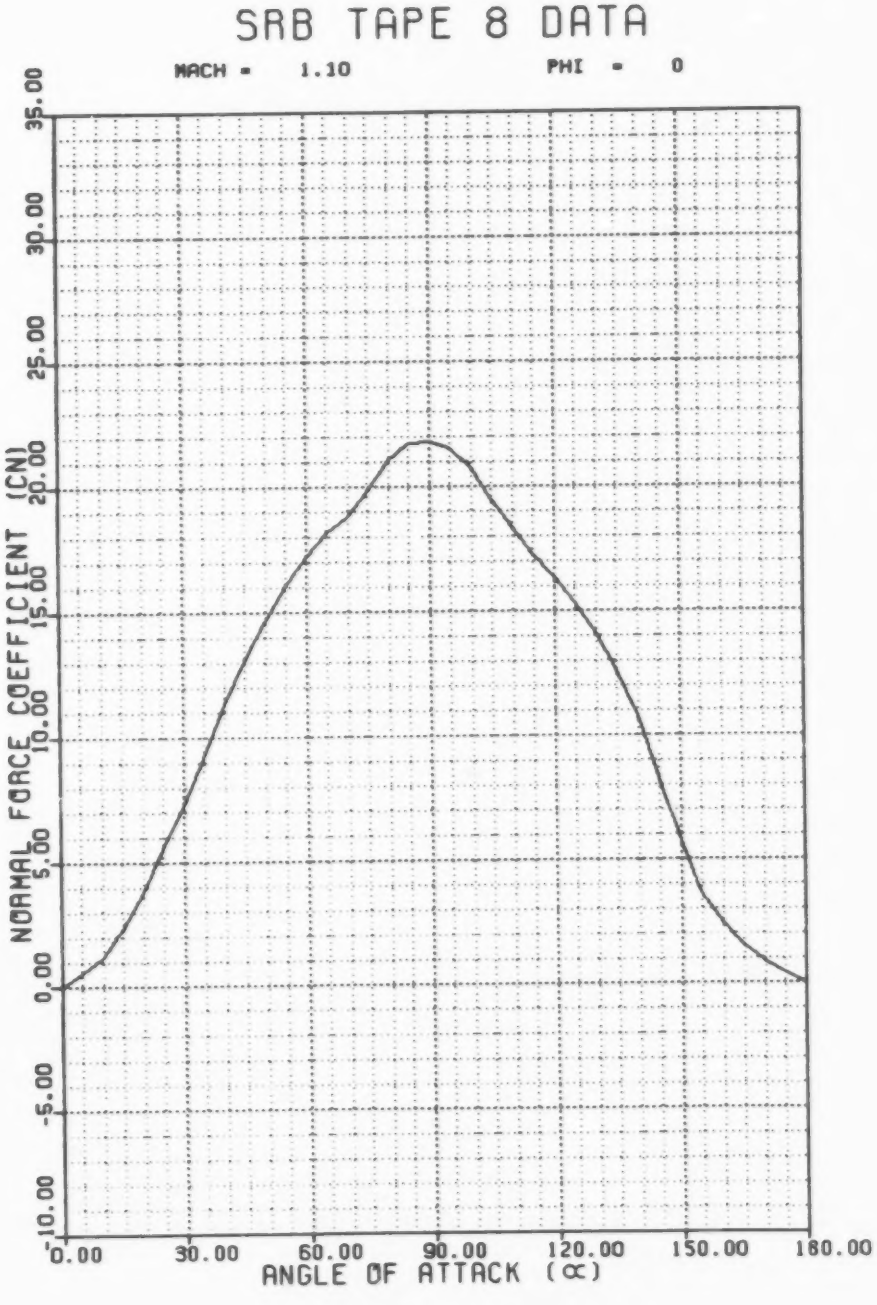
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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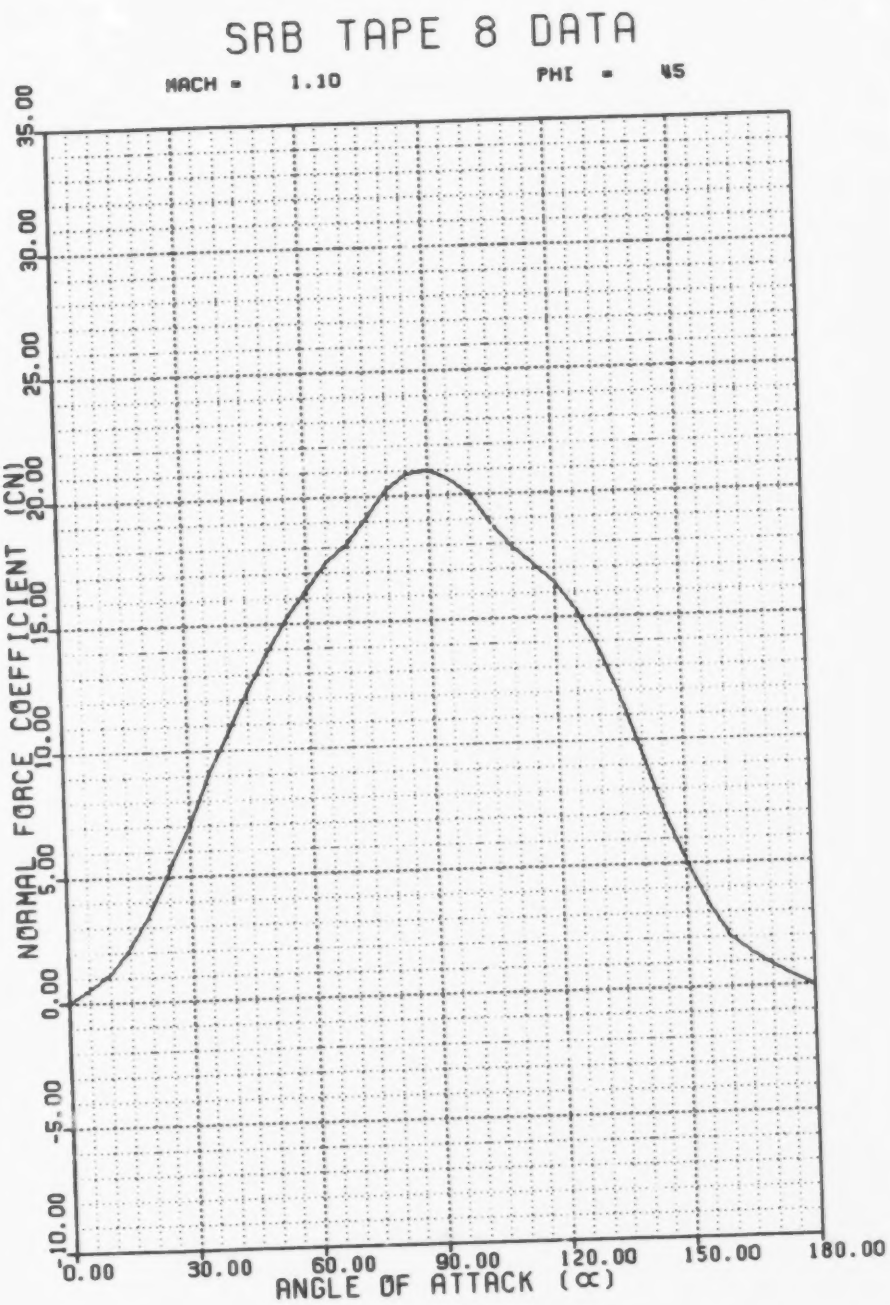
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 1.10
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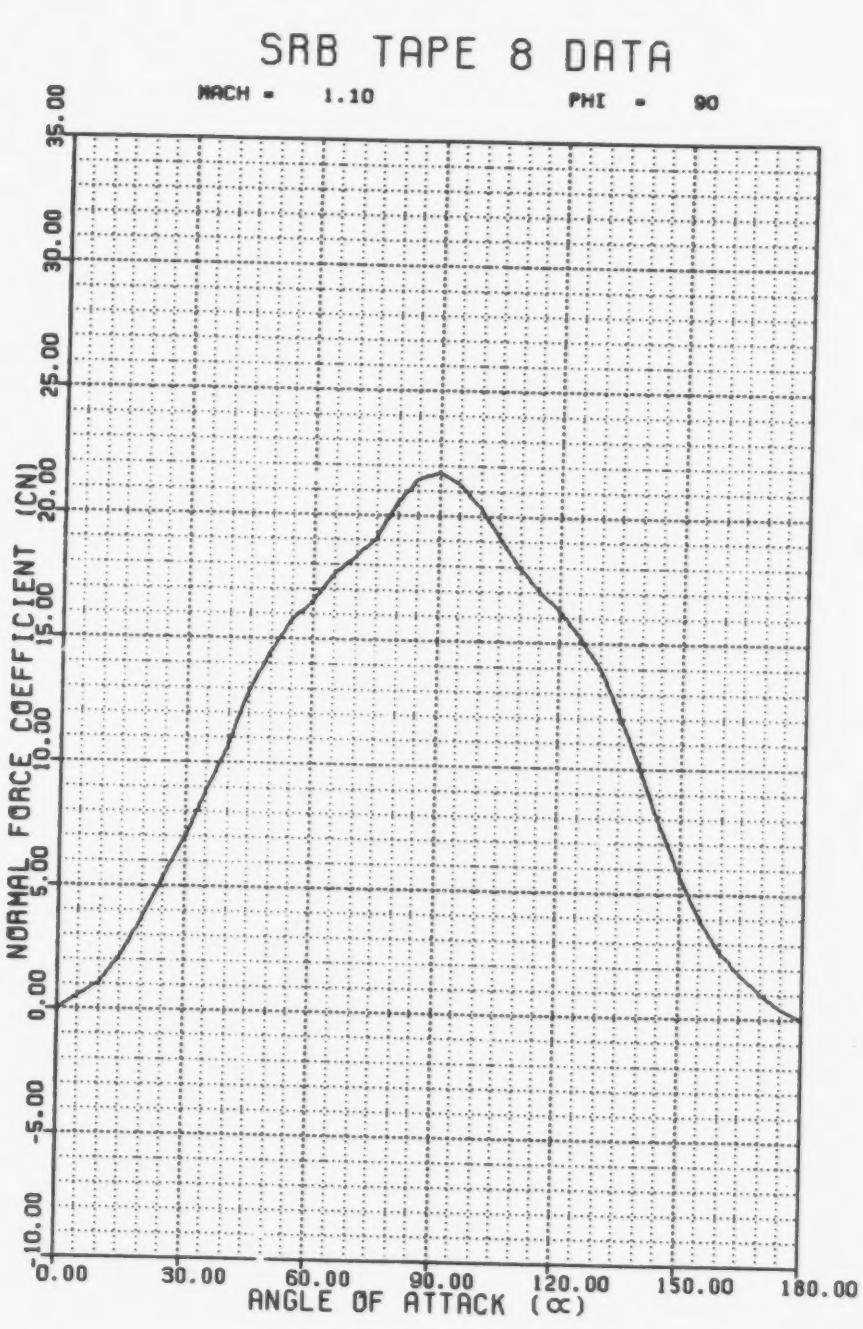
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 90
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10.00
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60.00
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120.00
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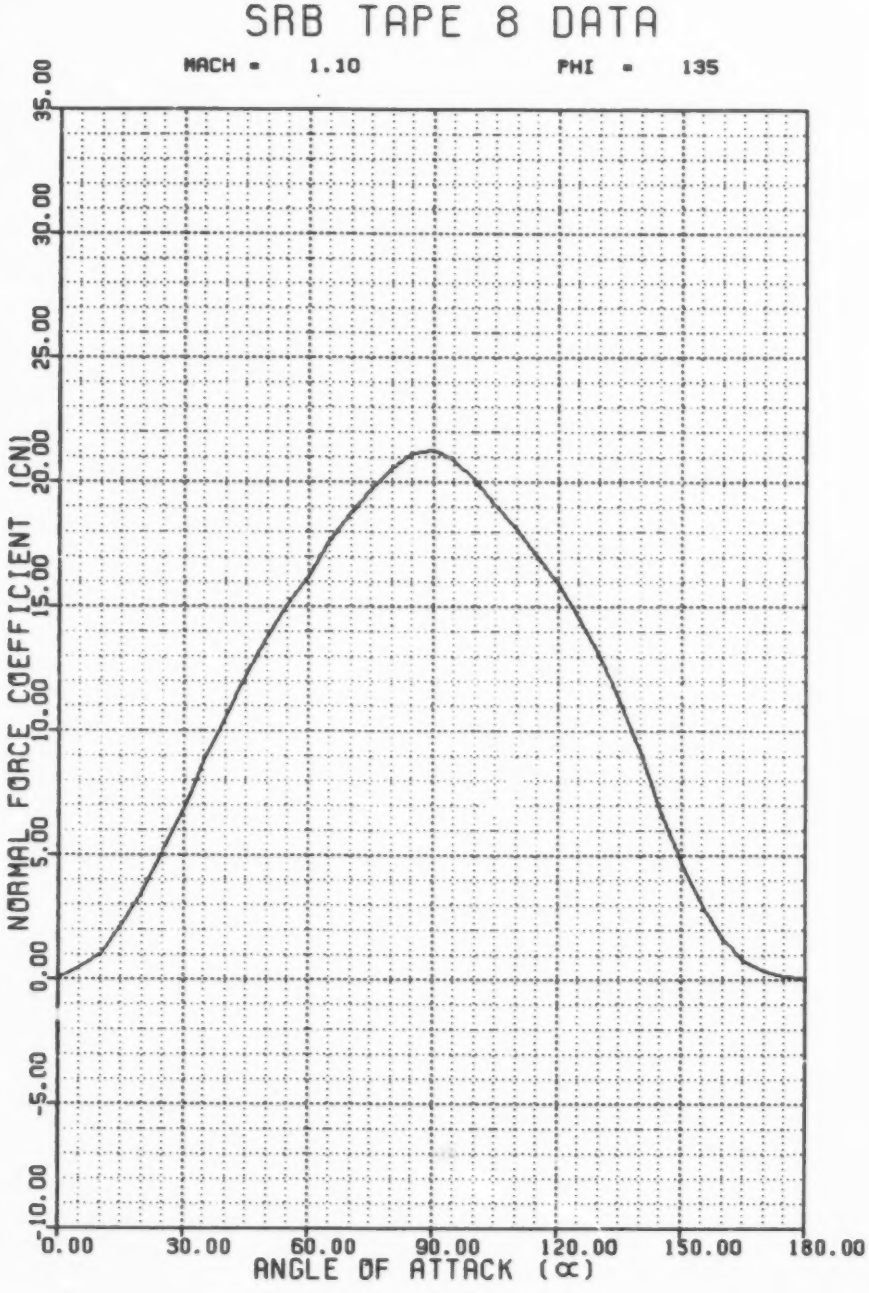
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
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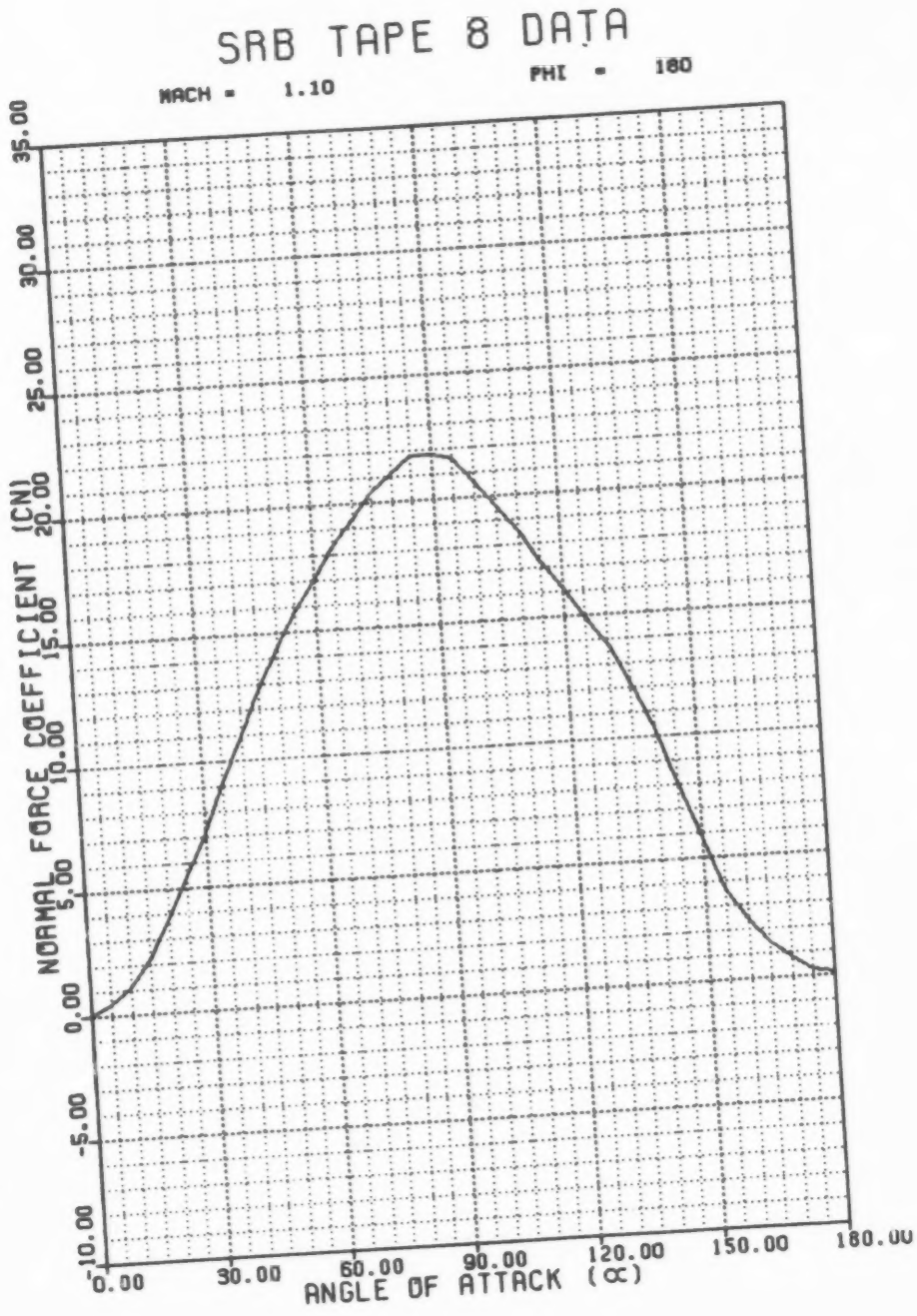
ANGLE OF ATTACK (α)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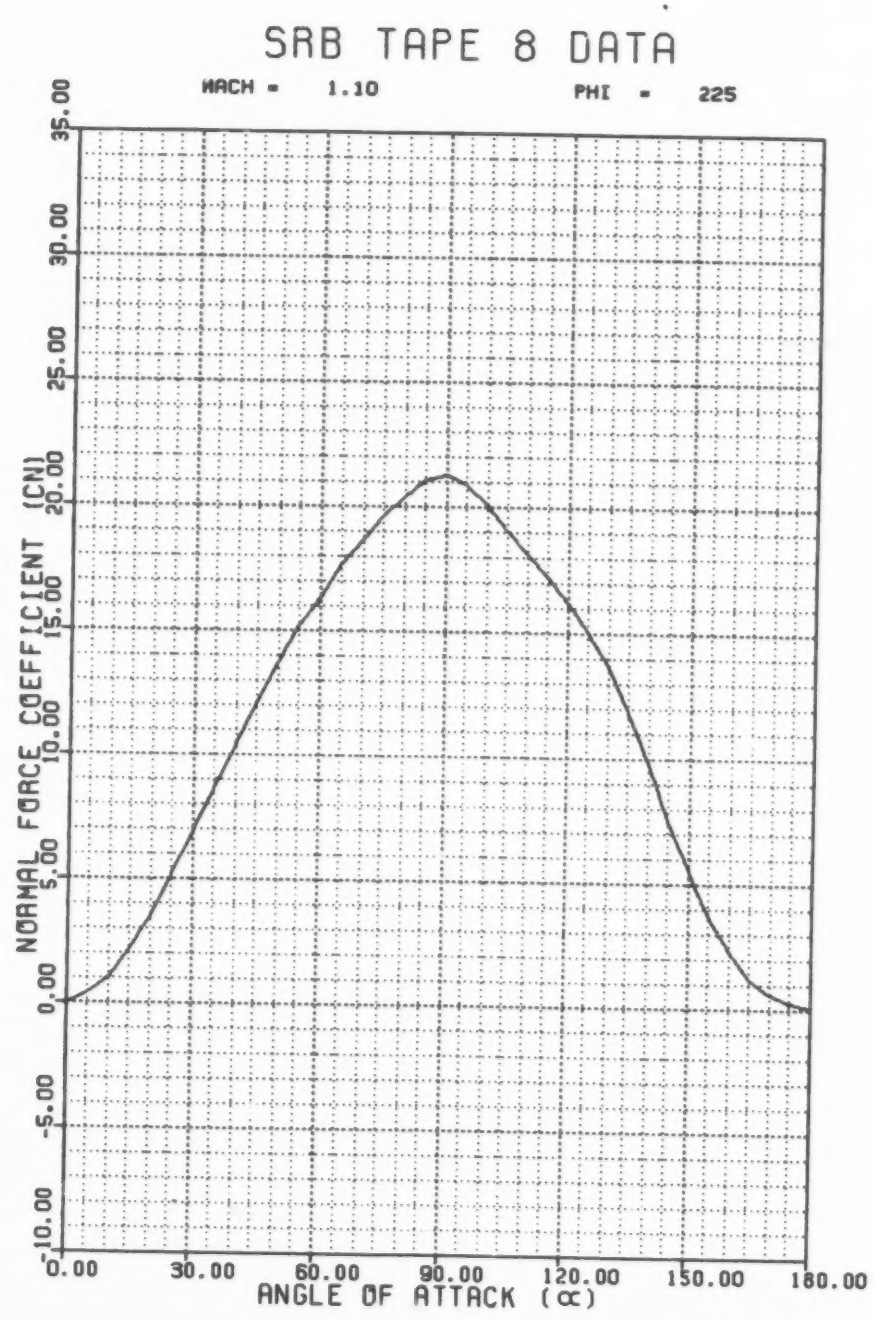
ANGLE OF ATTACK (α)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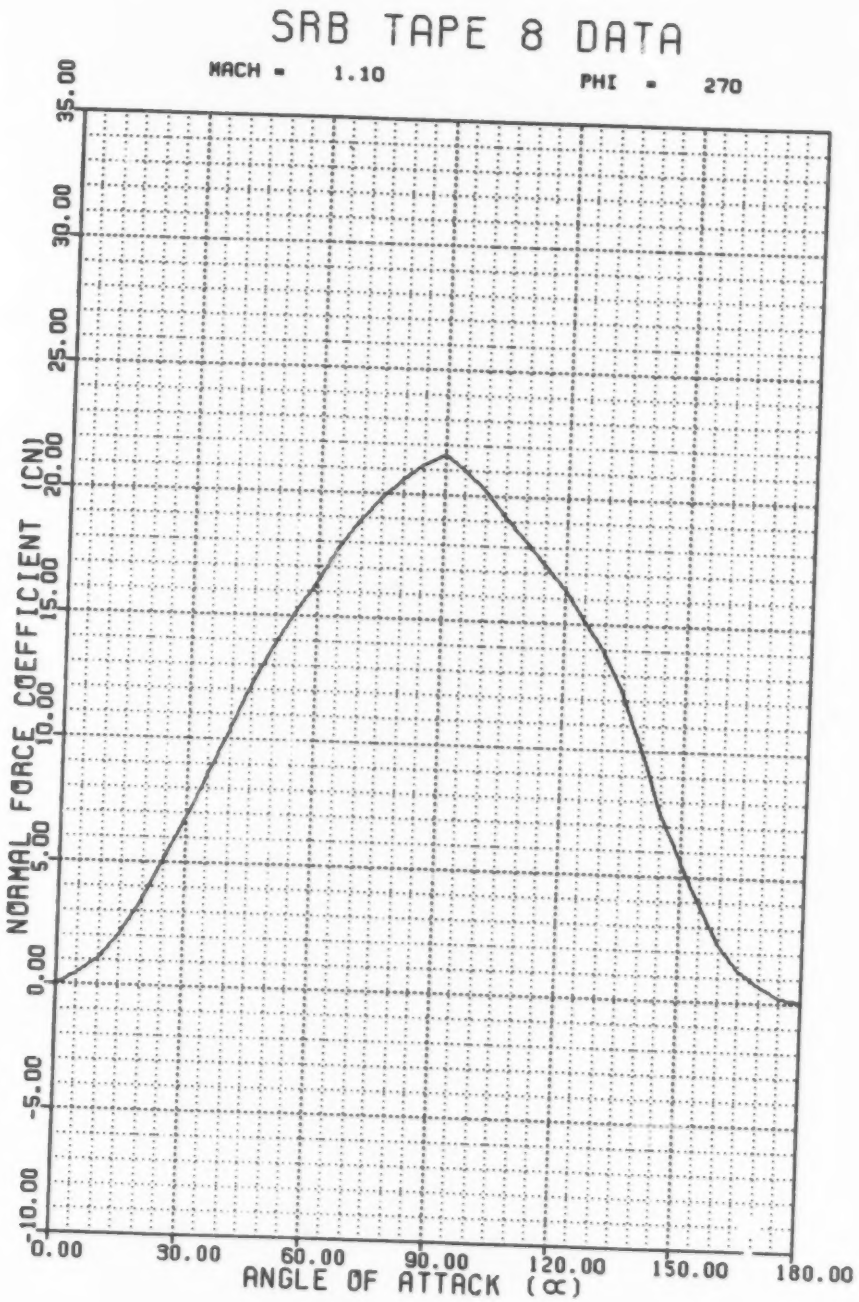
ANGLE OF ATTACK (α)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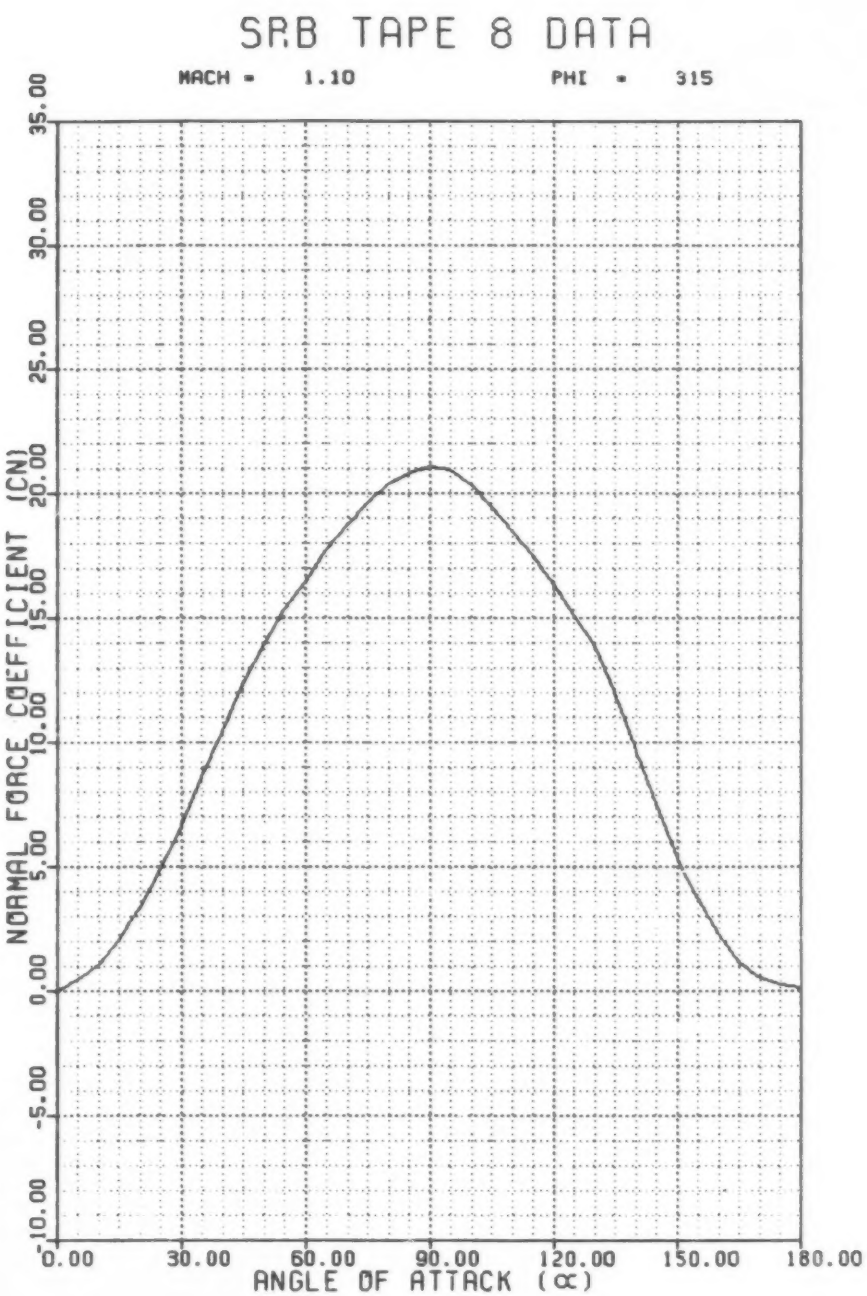
ANGLE OF ATTACK (α)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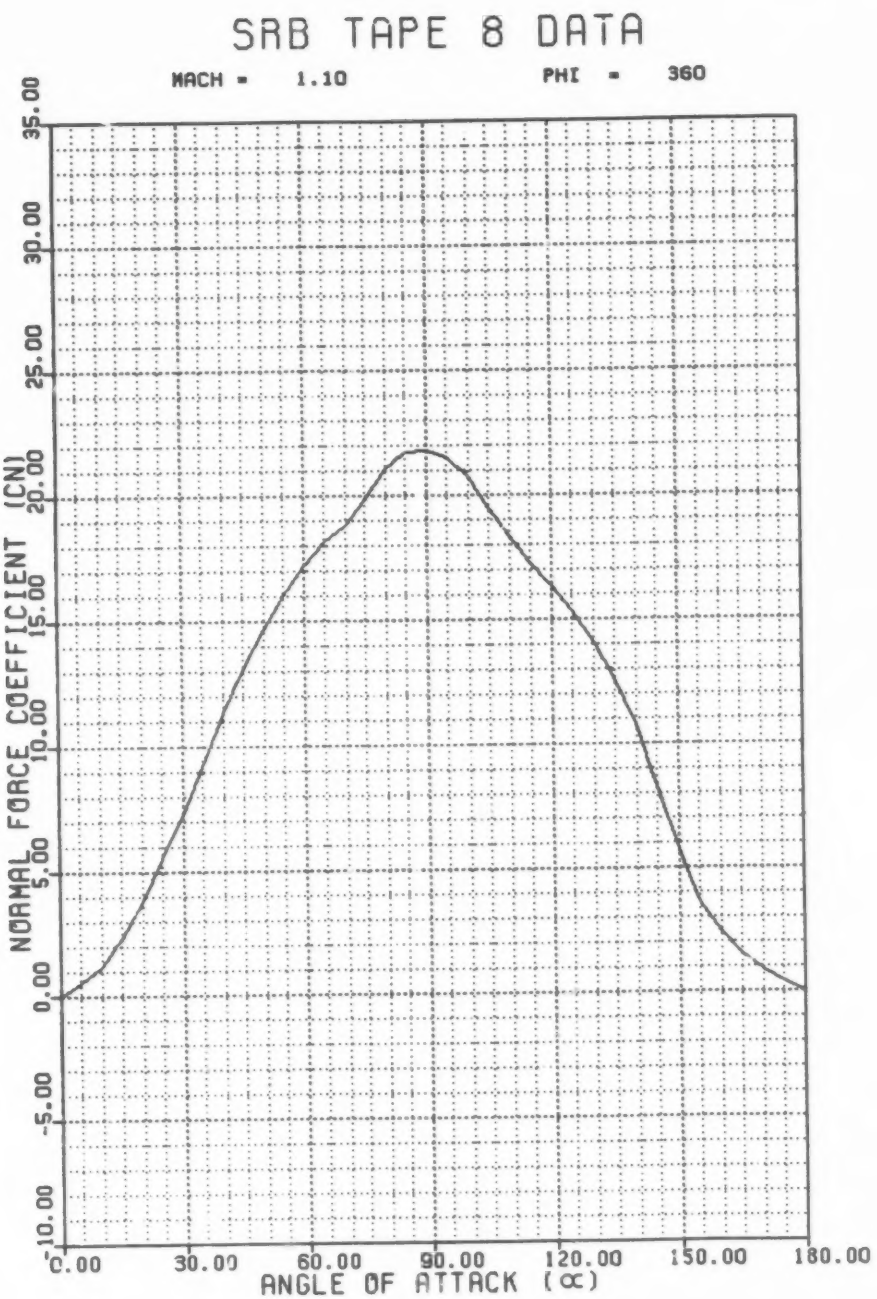
ANGLE OF ATTACK (α)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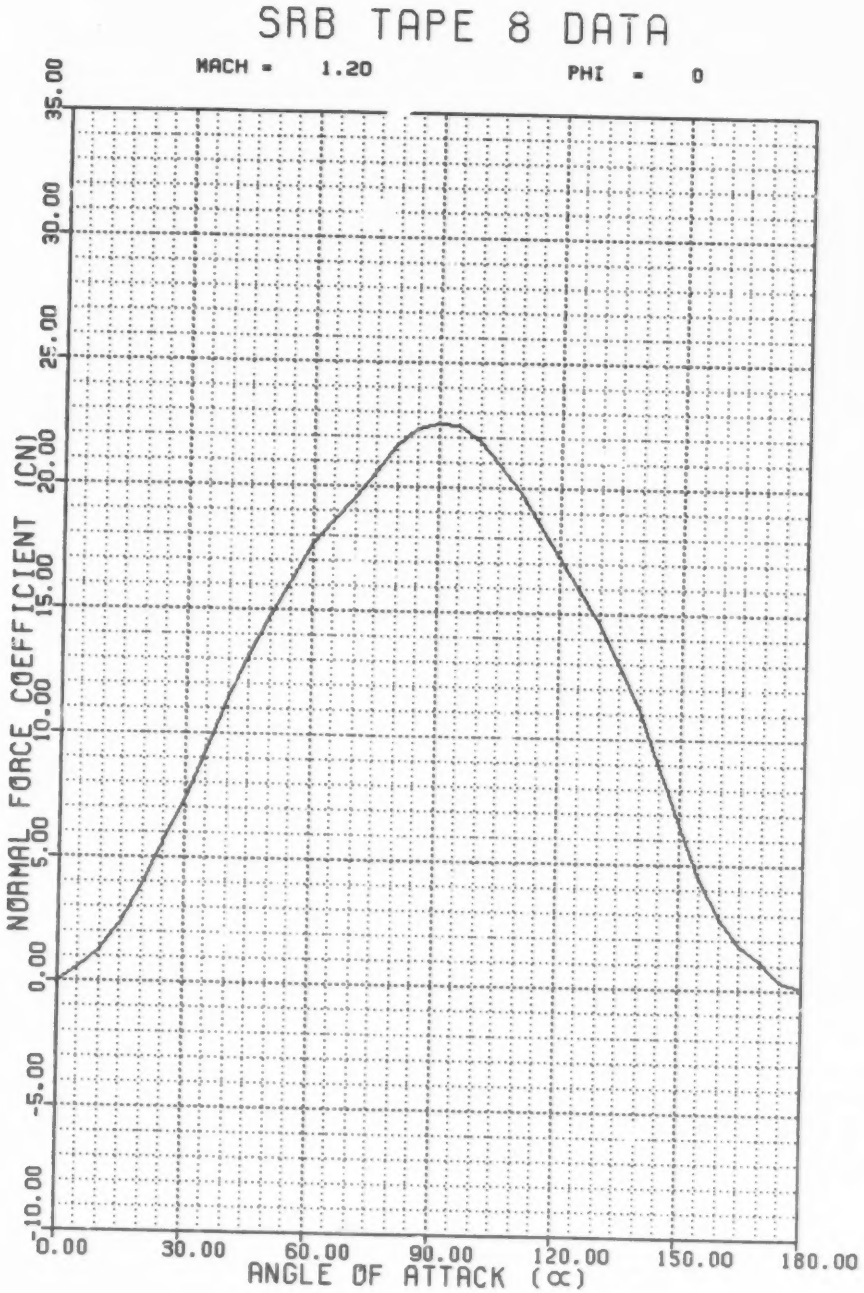
ANGLE OF ATTACK (α)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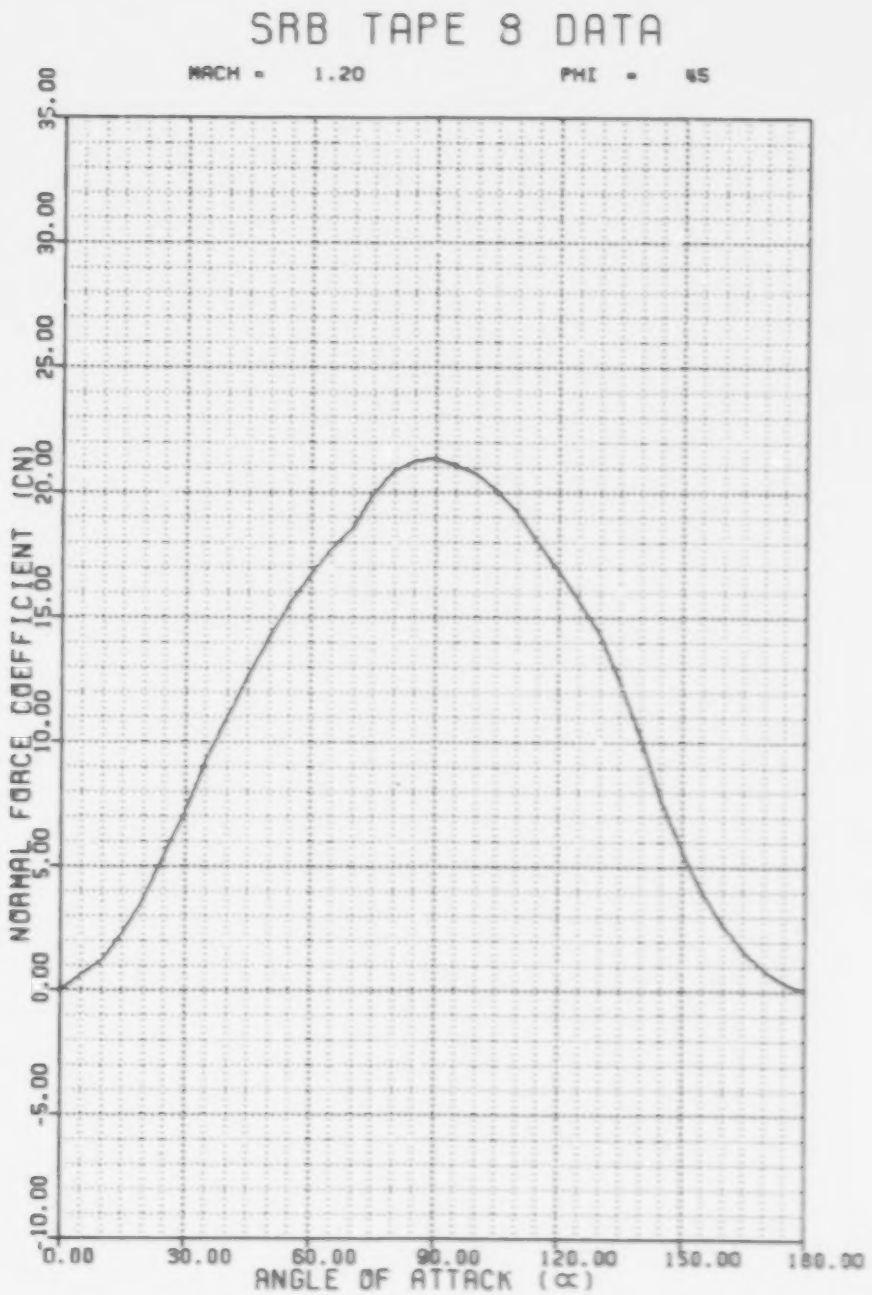
ANGLE OF ATTACK (α)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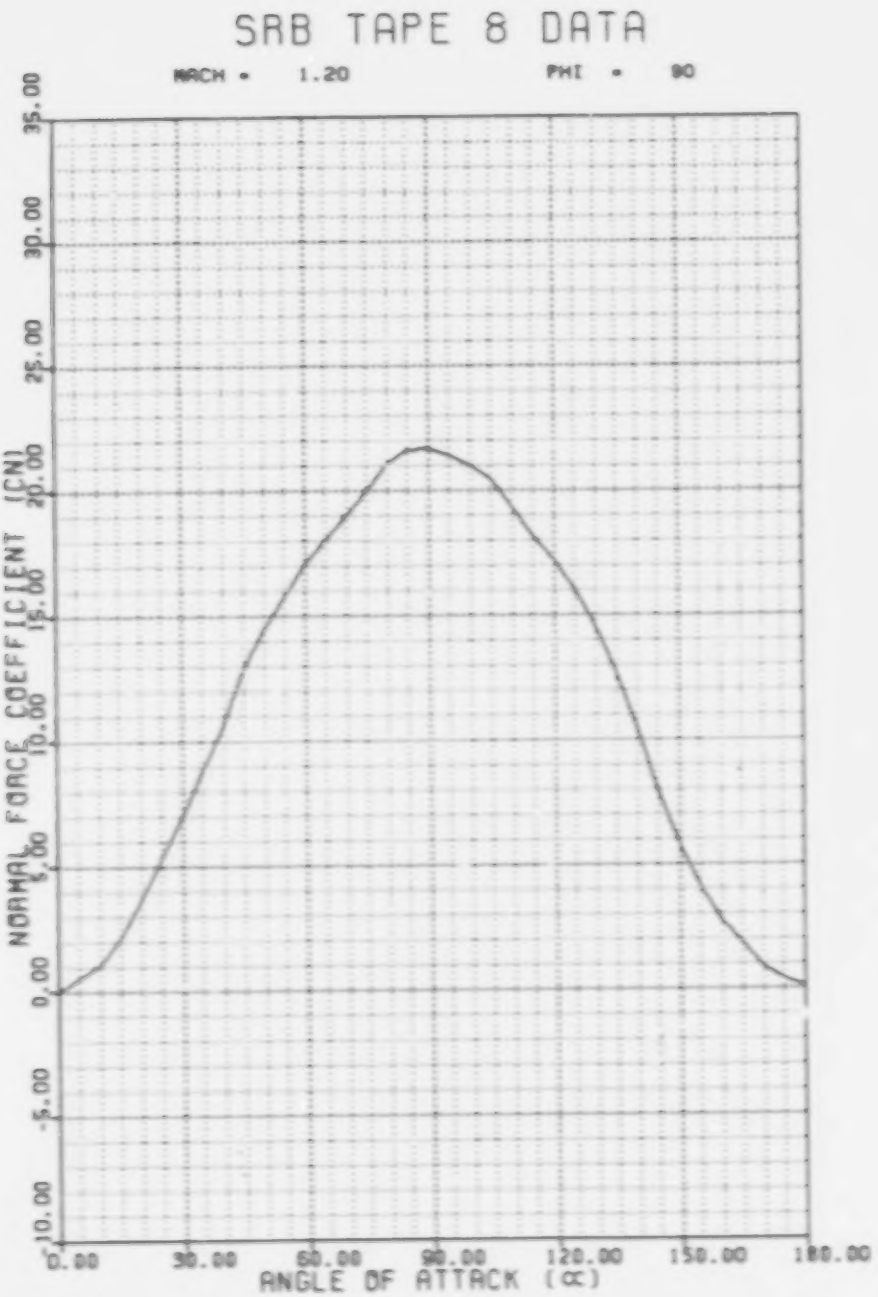
ANGLE OF ATTACK (α)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PHI • 90
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120.00
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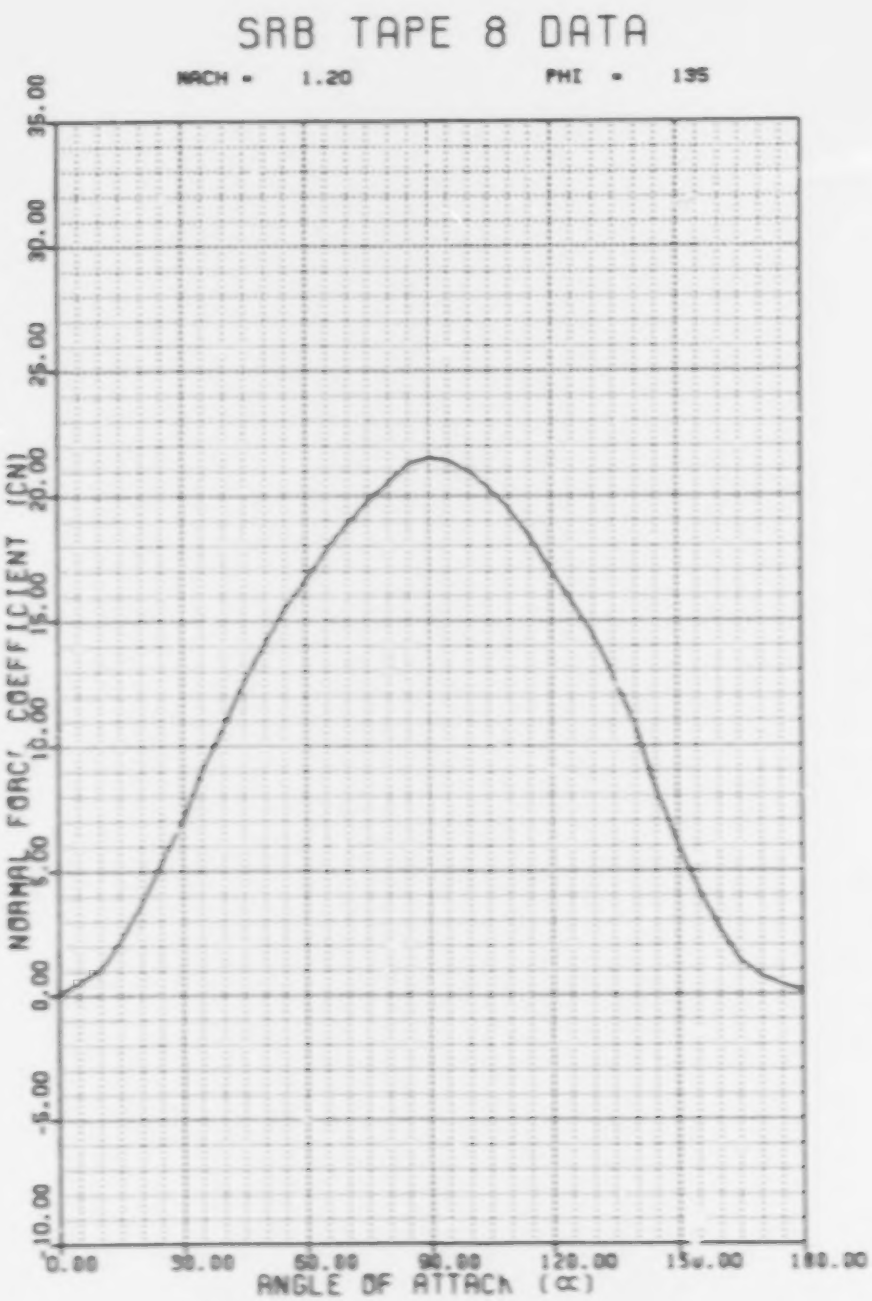
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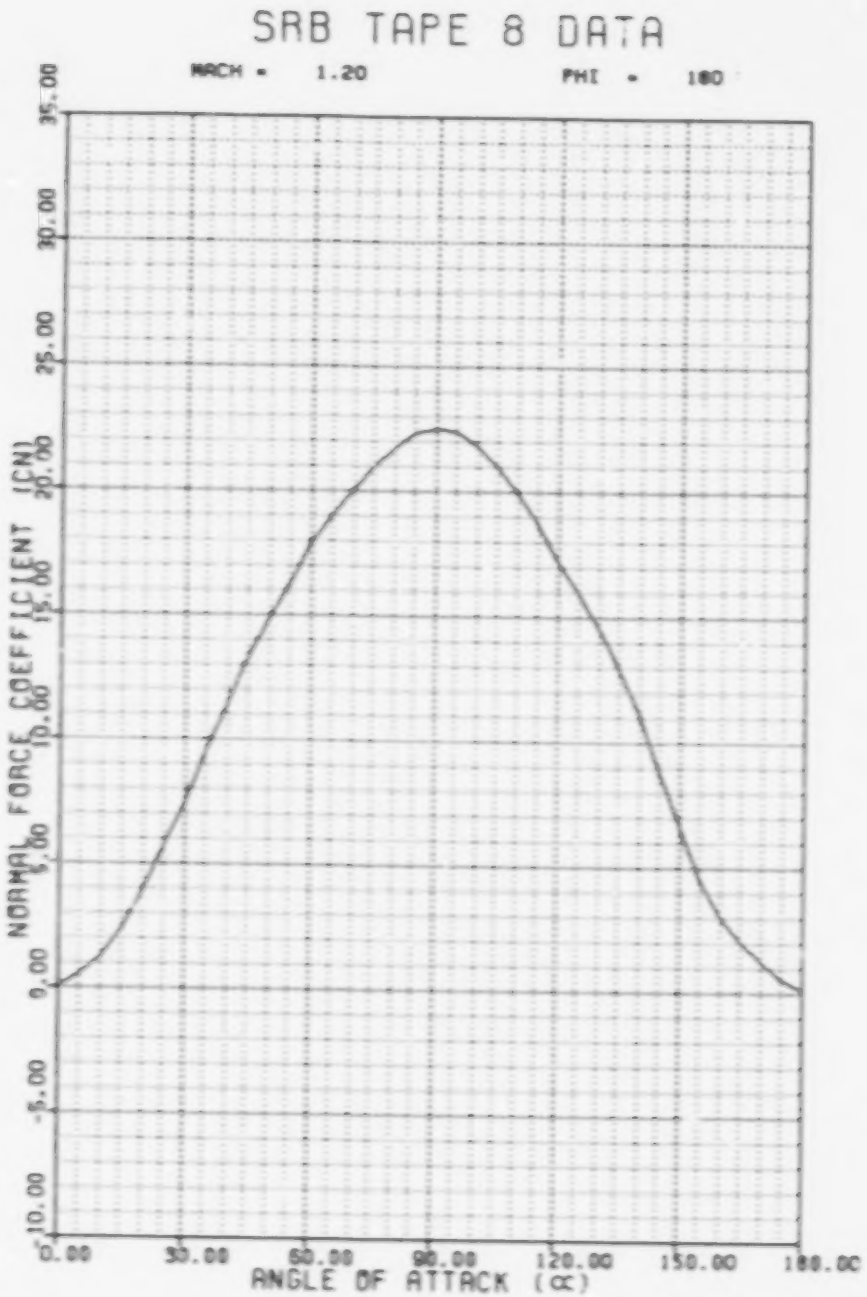
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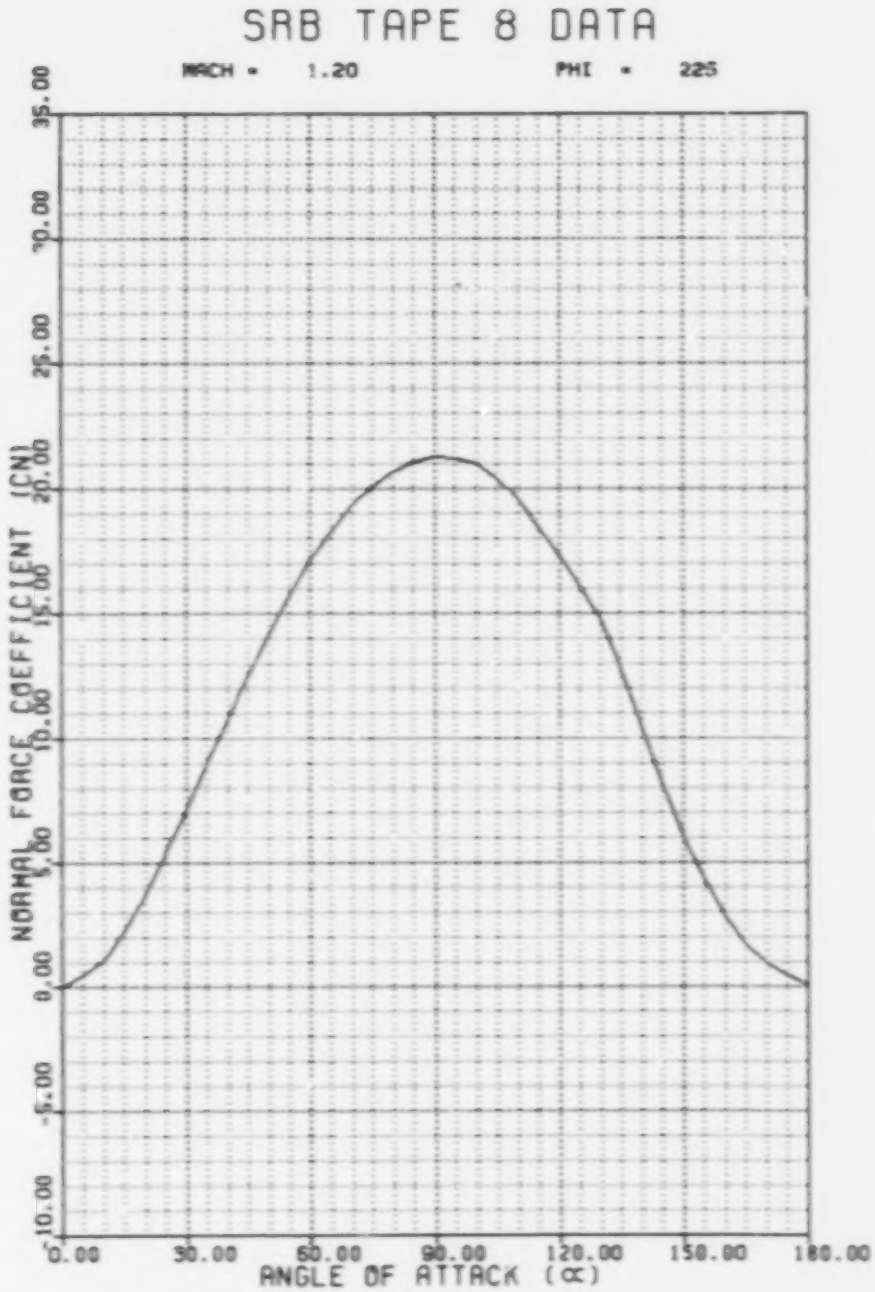
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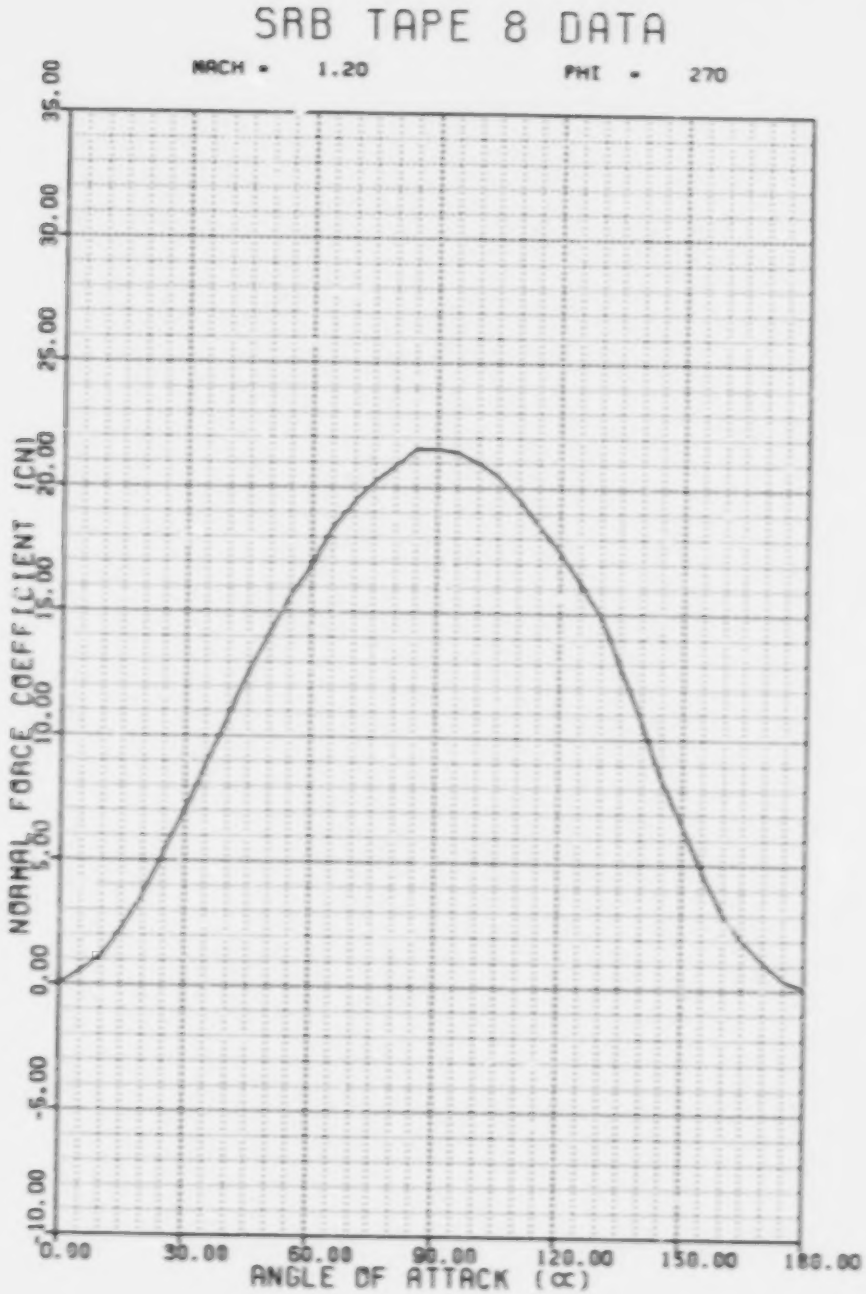
ANGLE OF ATTACK (α)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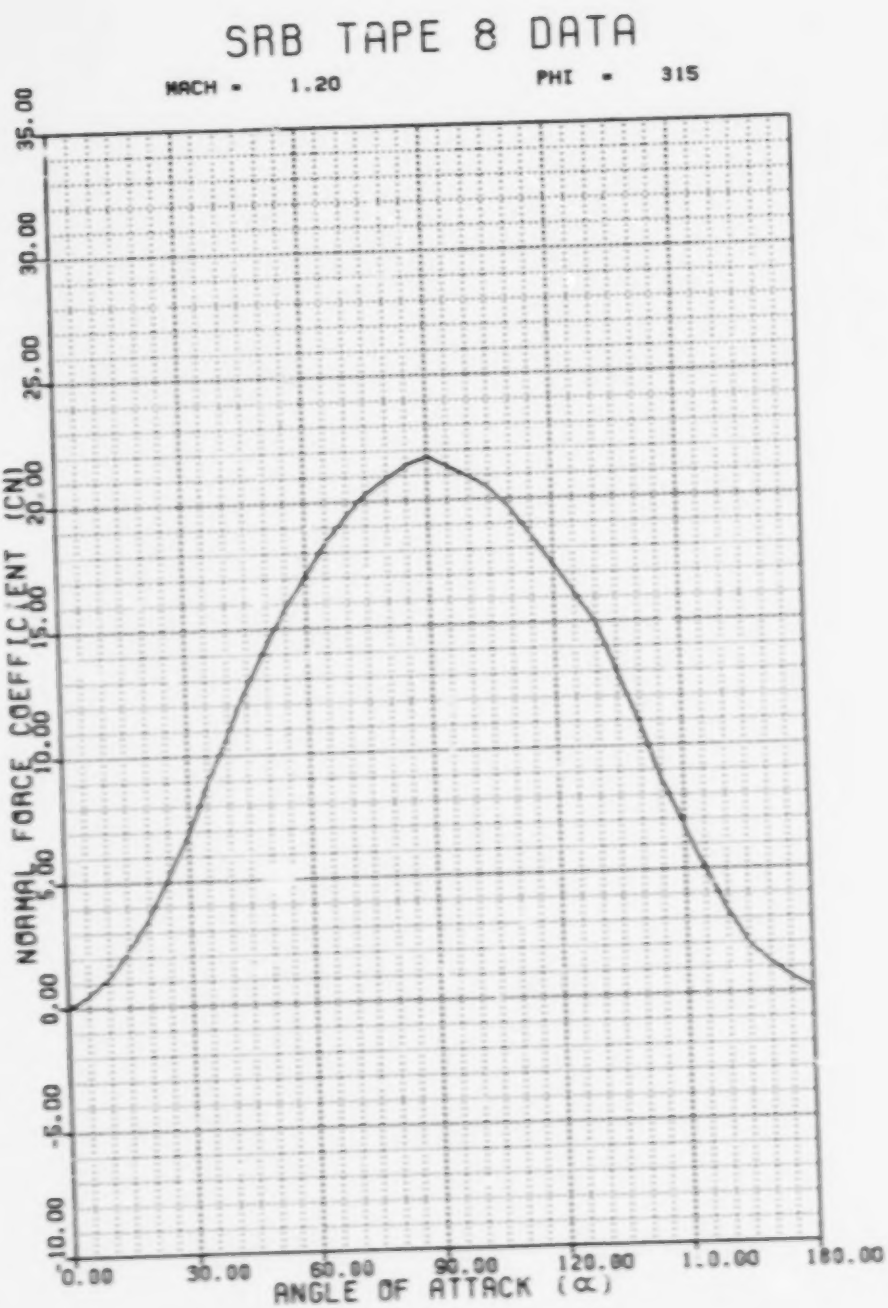
ANGLE OF ATTACK (α)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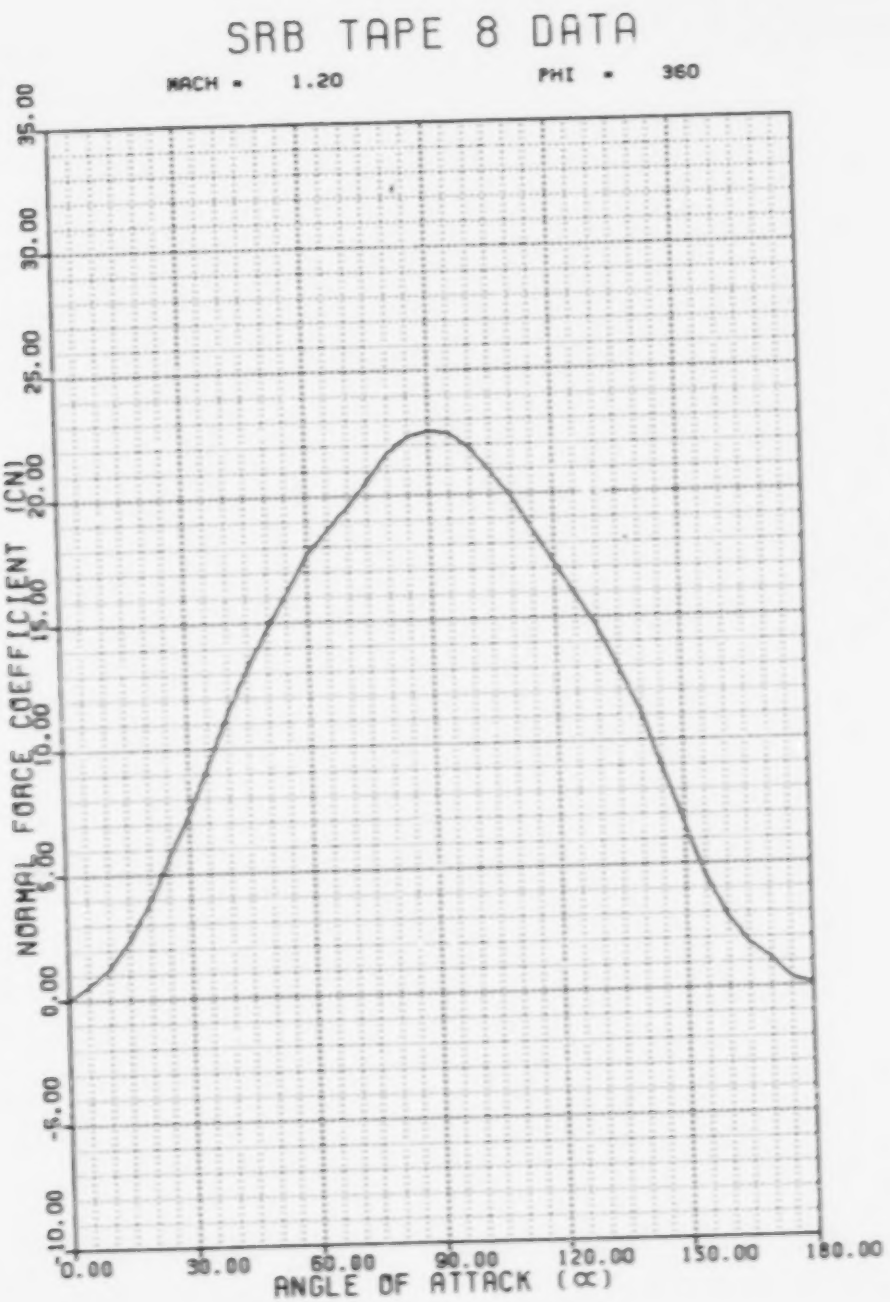
ANGLE OF ATTACK (α)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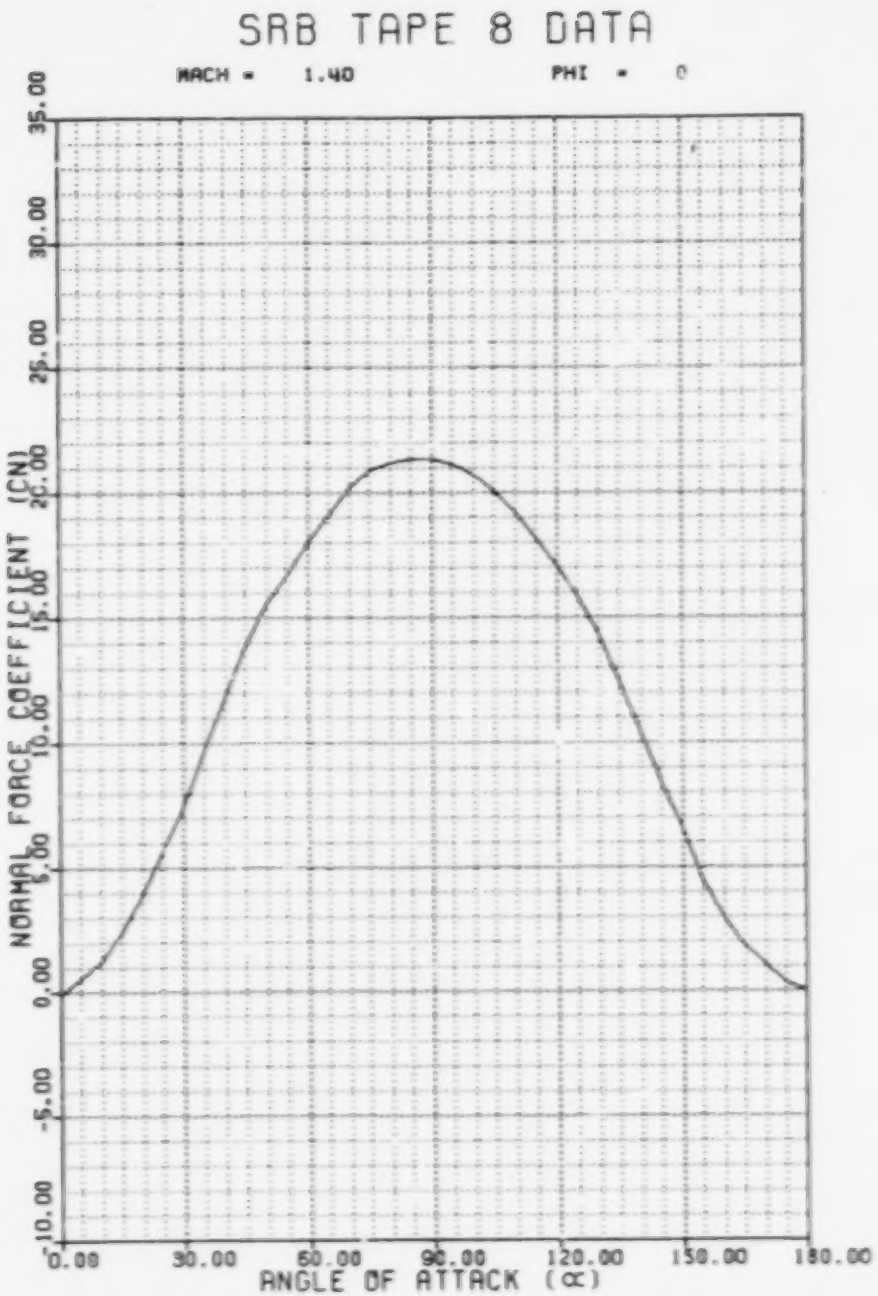
ANGLE OF ATTACK (α)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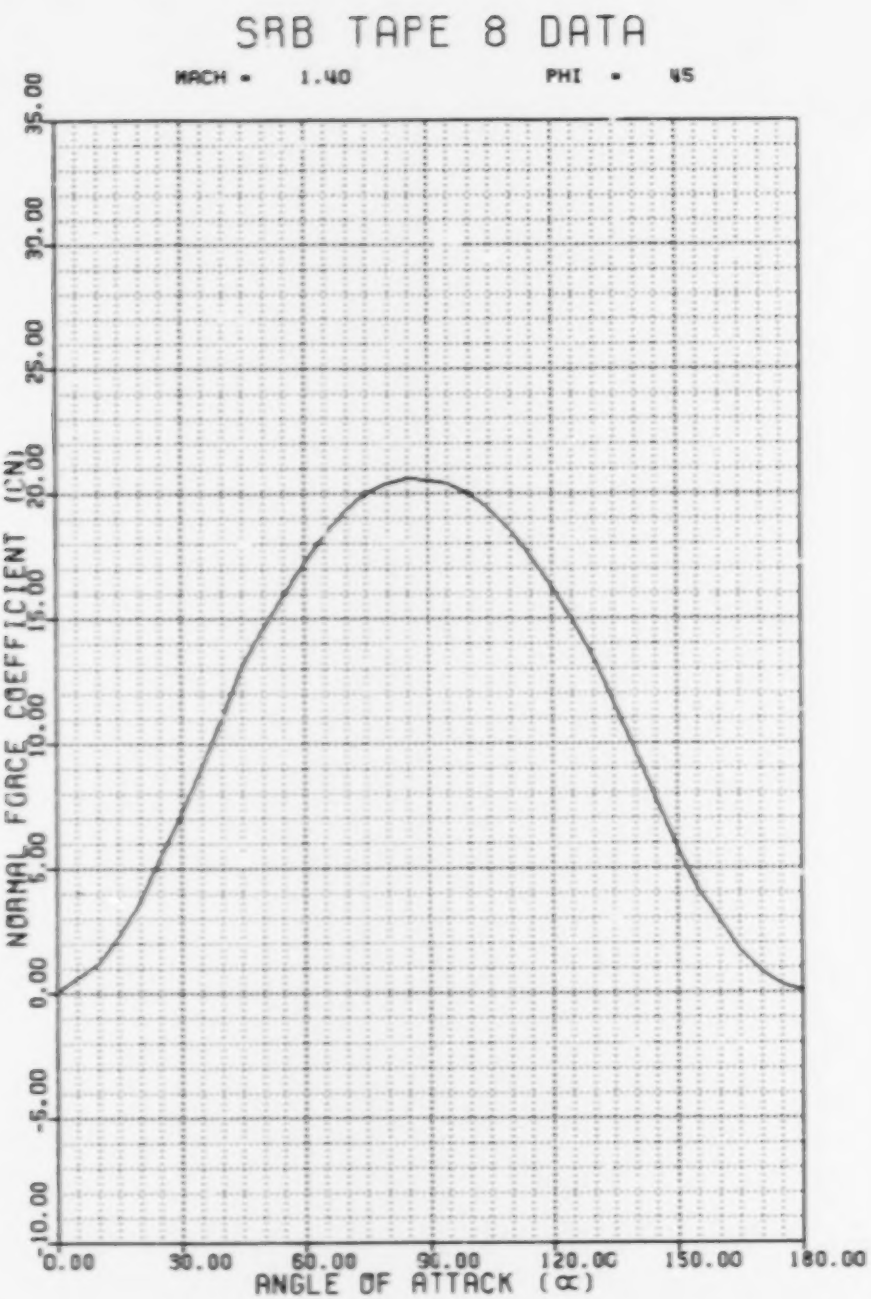
180.00
ANGLE OF ATTACK (α)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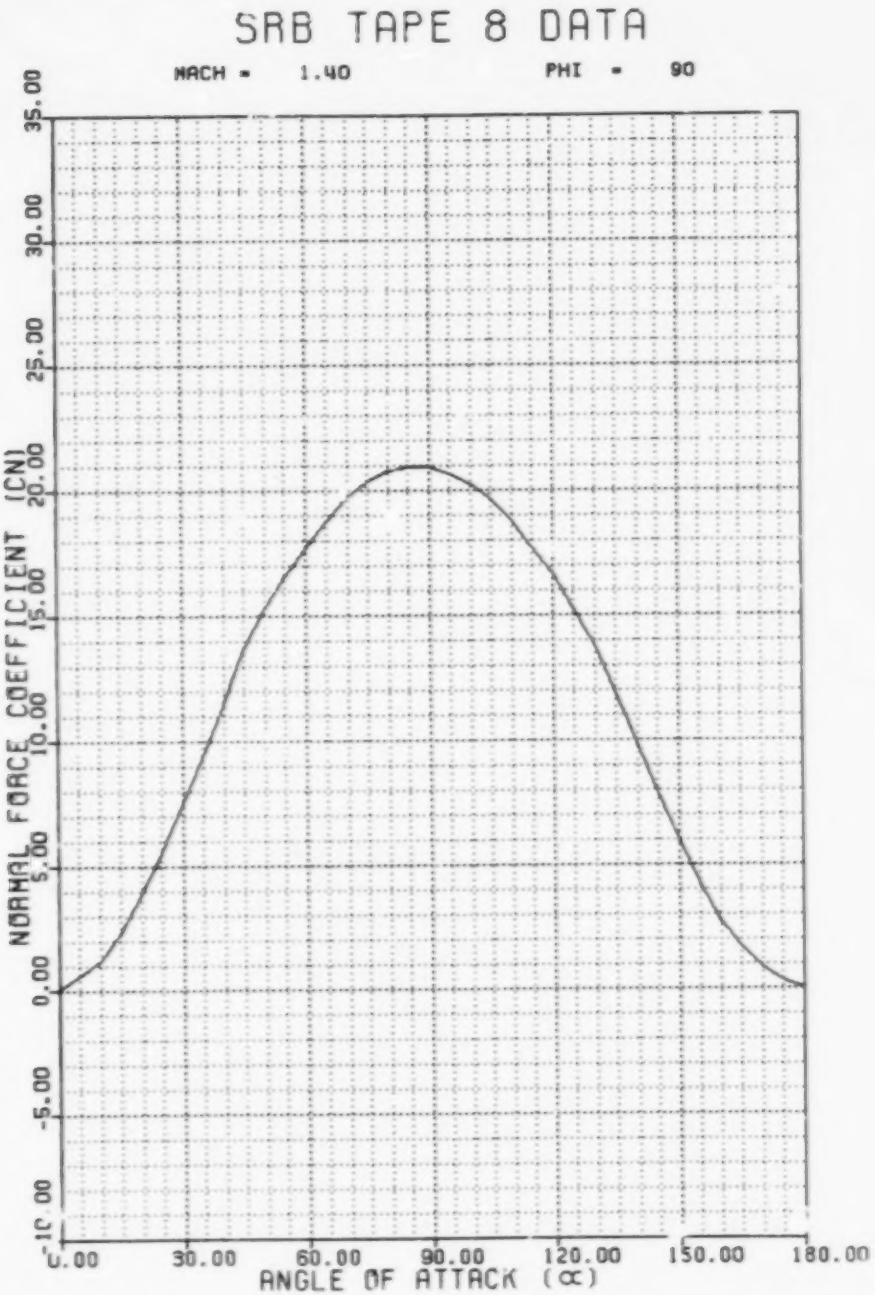
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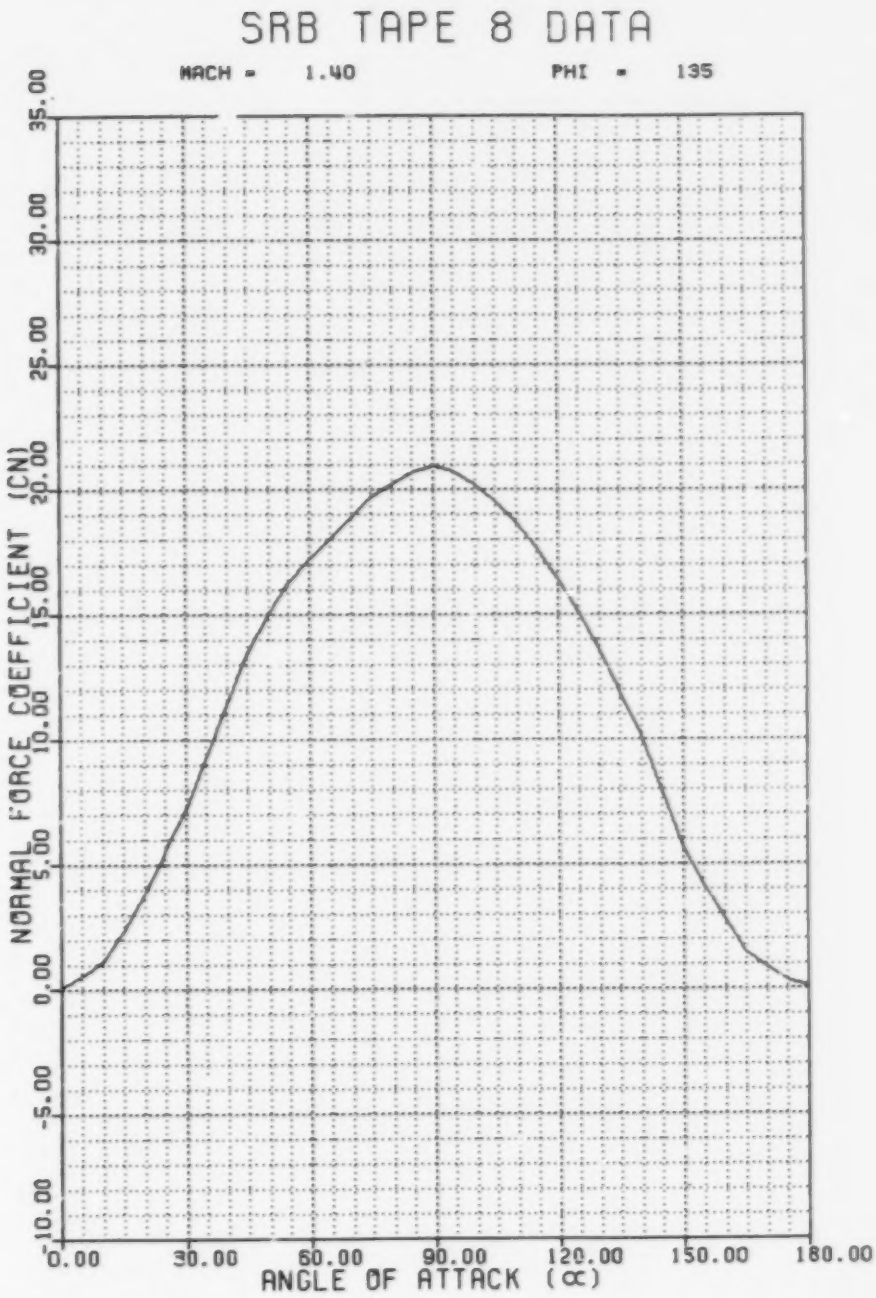
ANGLE OF ATTACK (α)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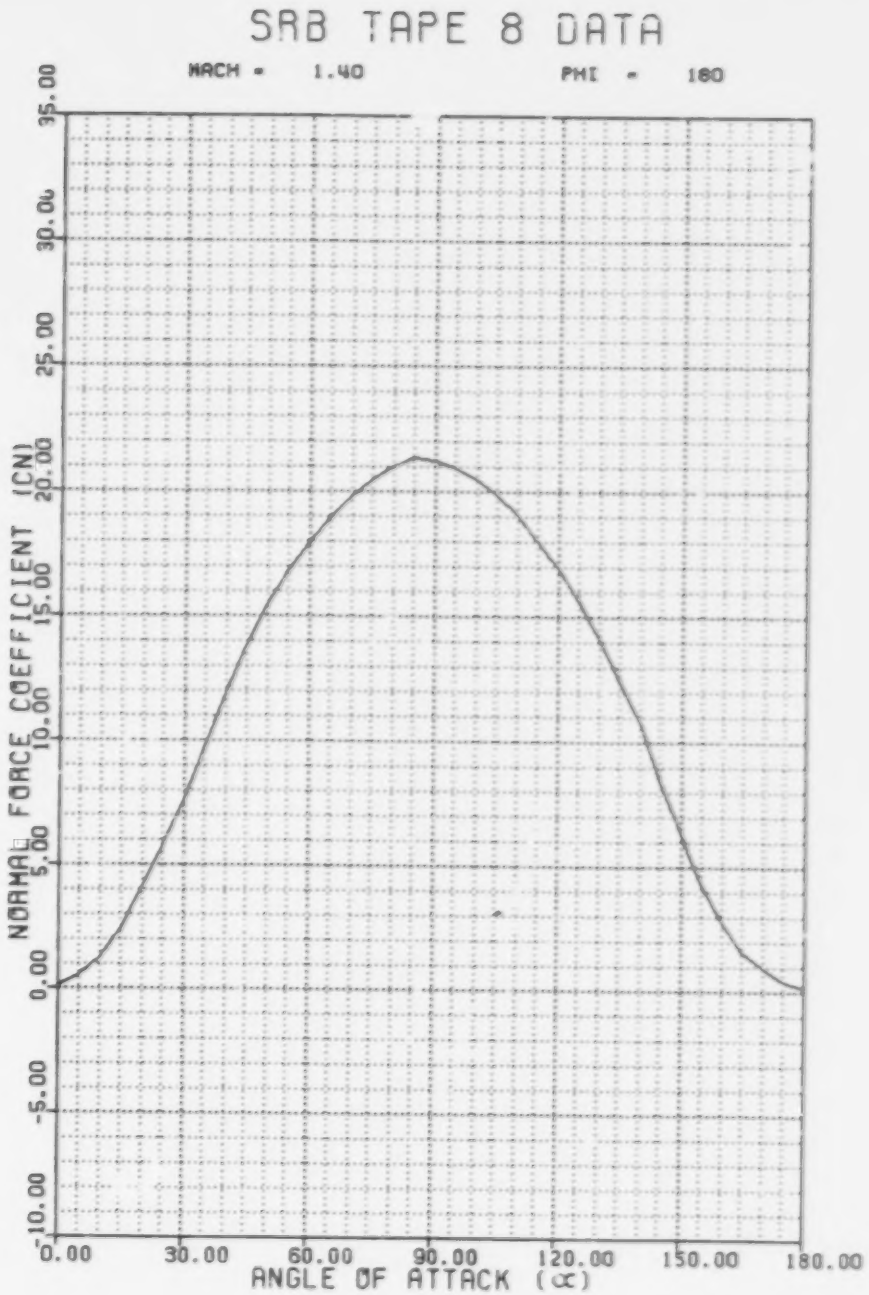
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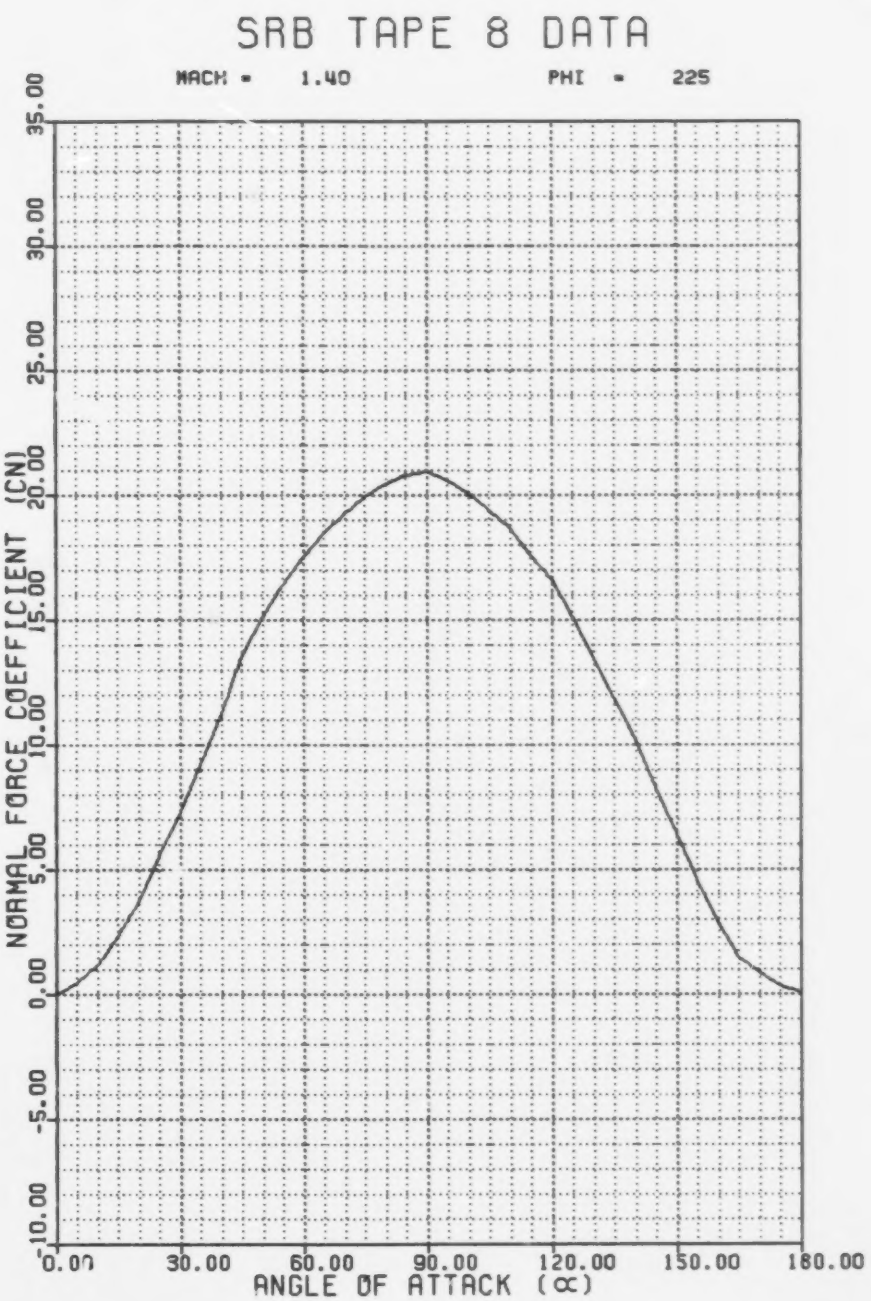
ANGLE OF ATTACK (α)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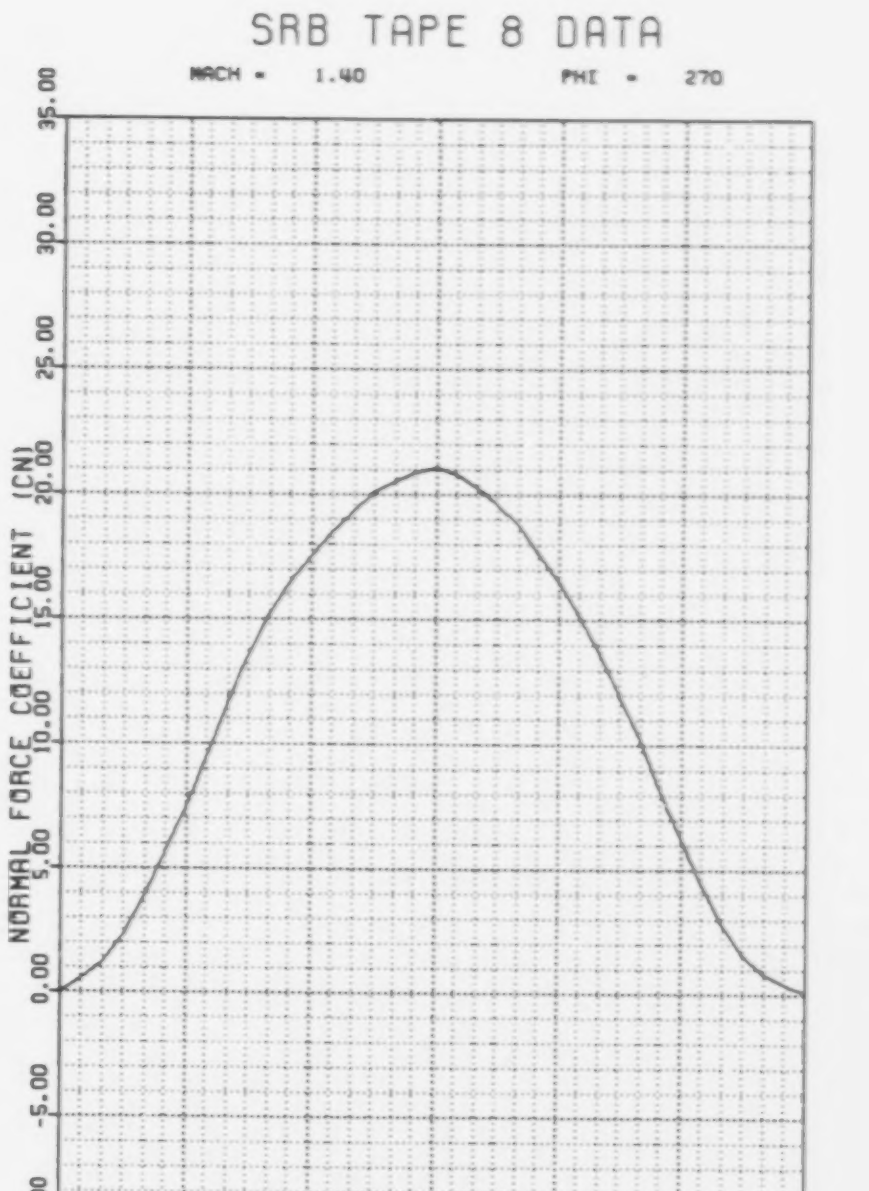
ANGLE OF ATTACK (α)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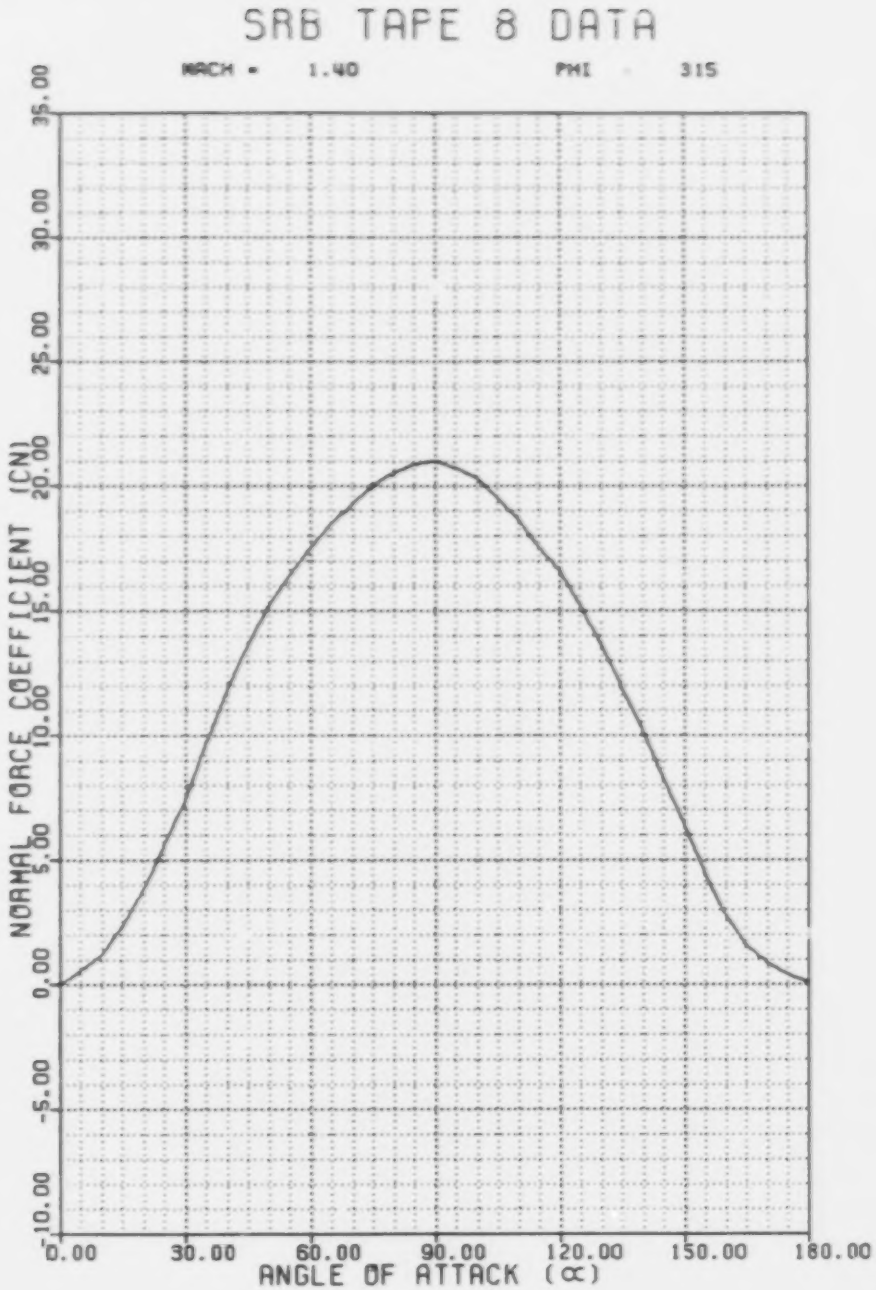
ANGLE OF ATTACK (α)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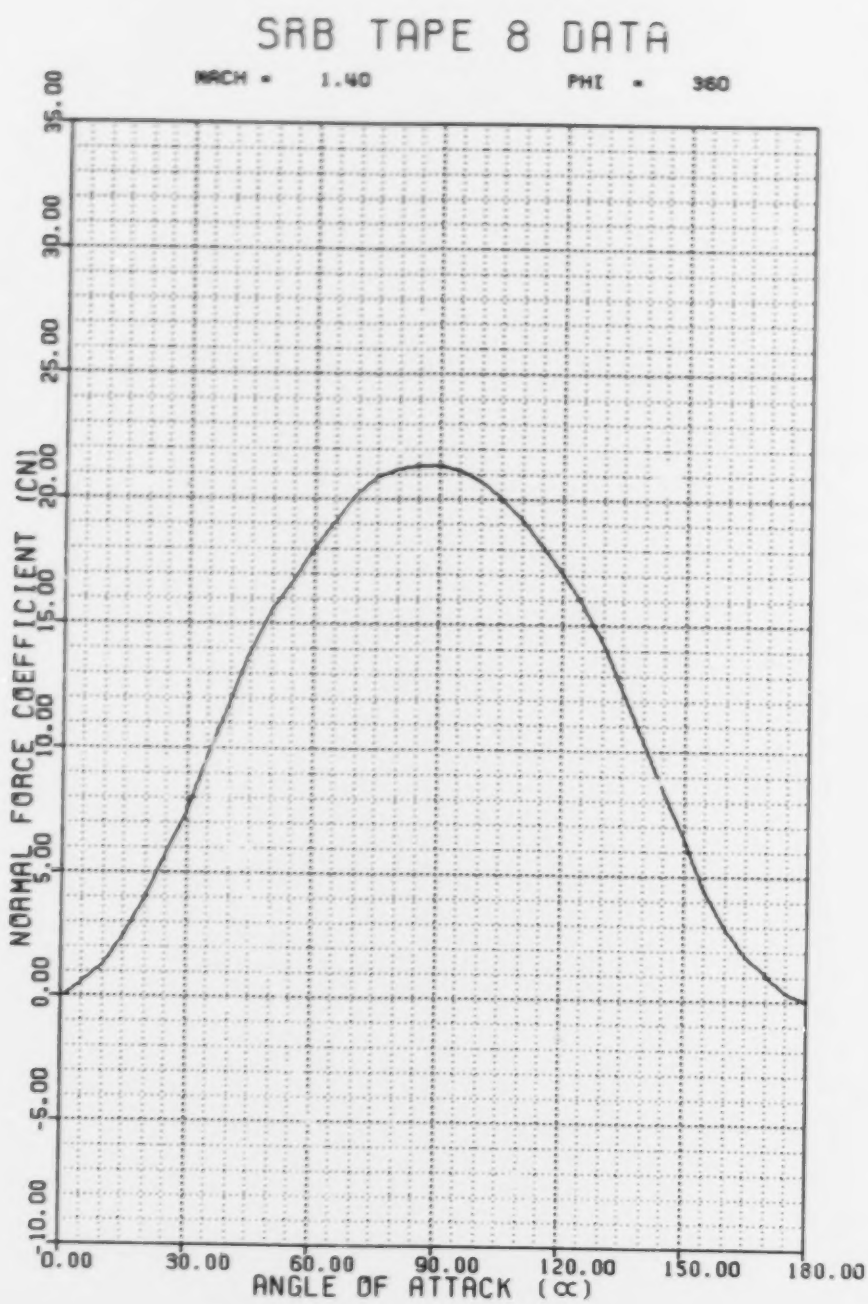
ANGLE OF ATTACK (α)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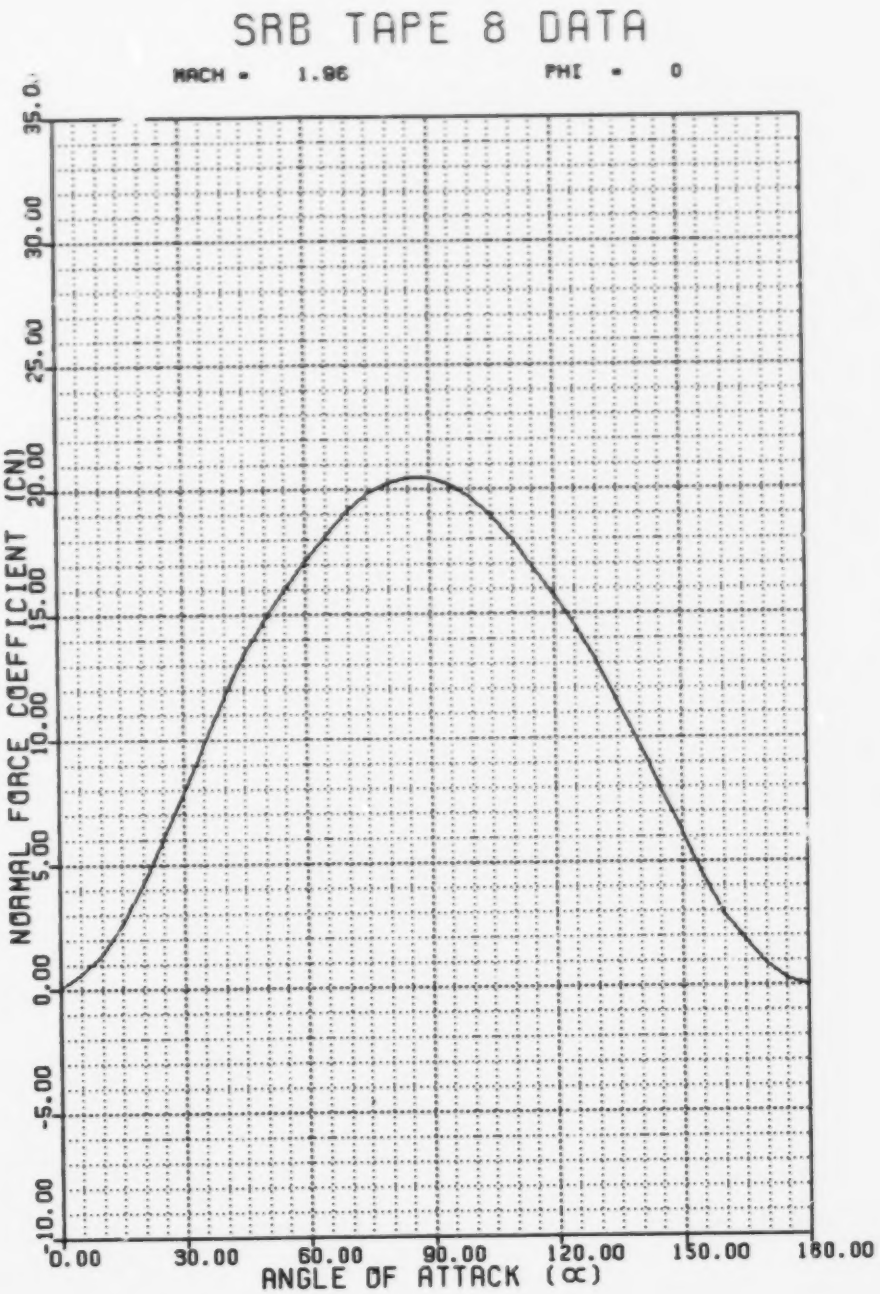
ANGLE OF ATTACK (α)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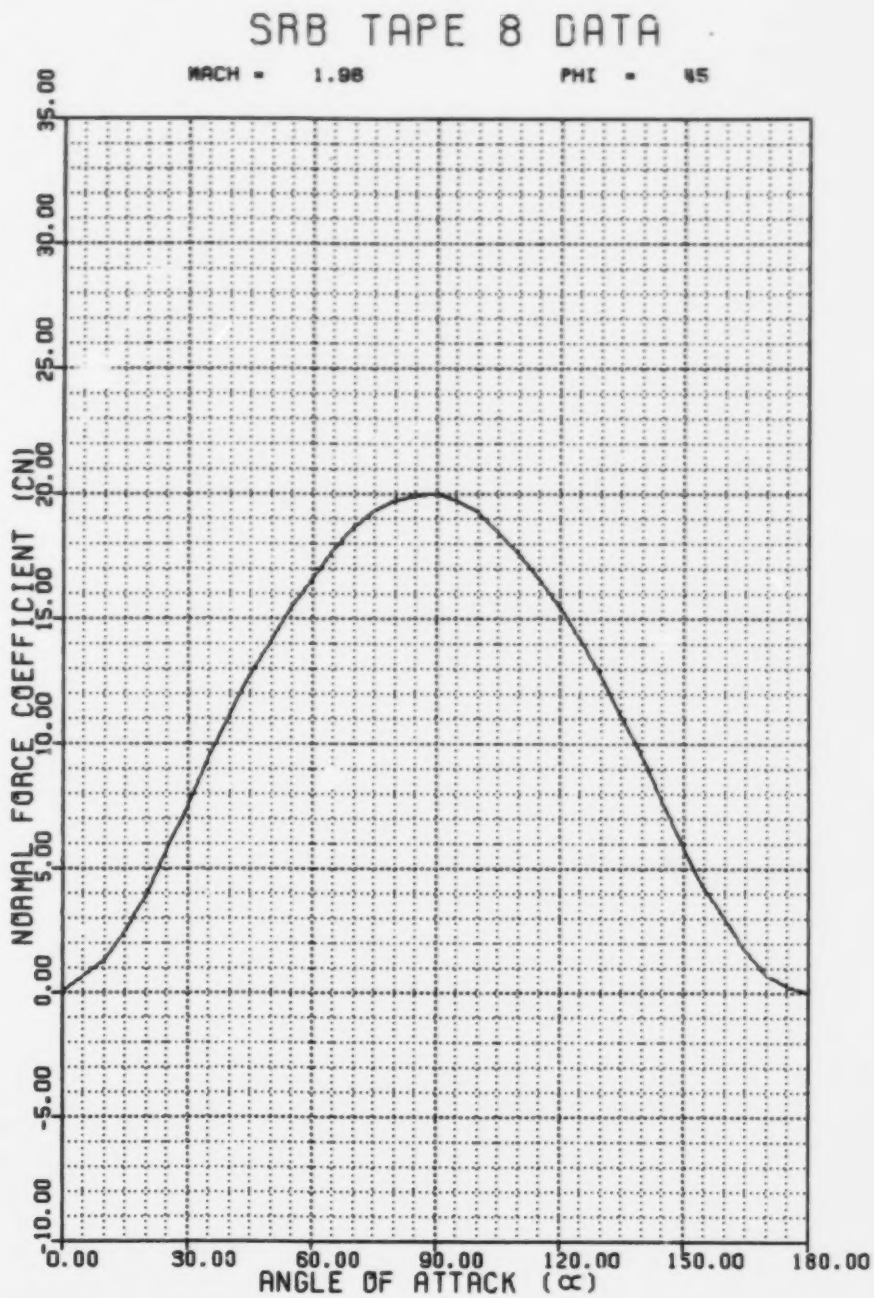
ANGLE OF ATTACK (α)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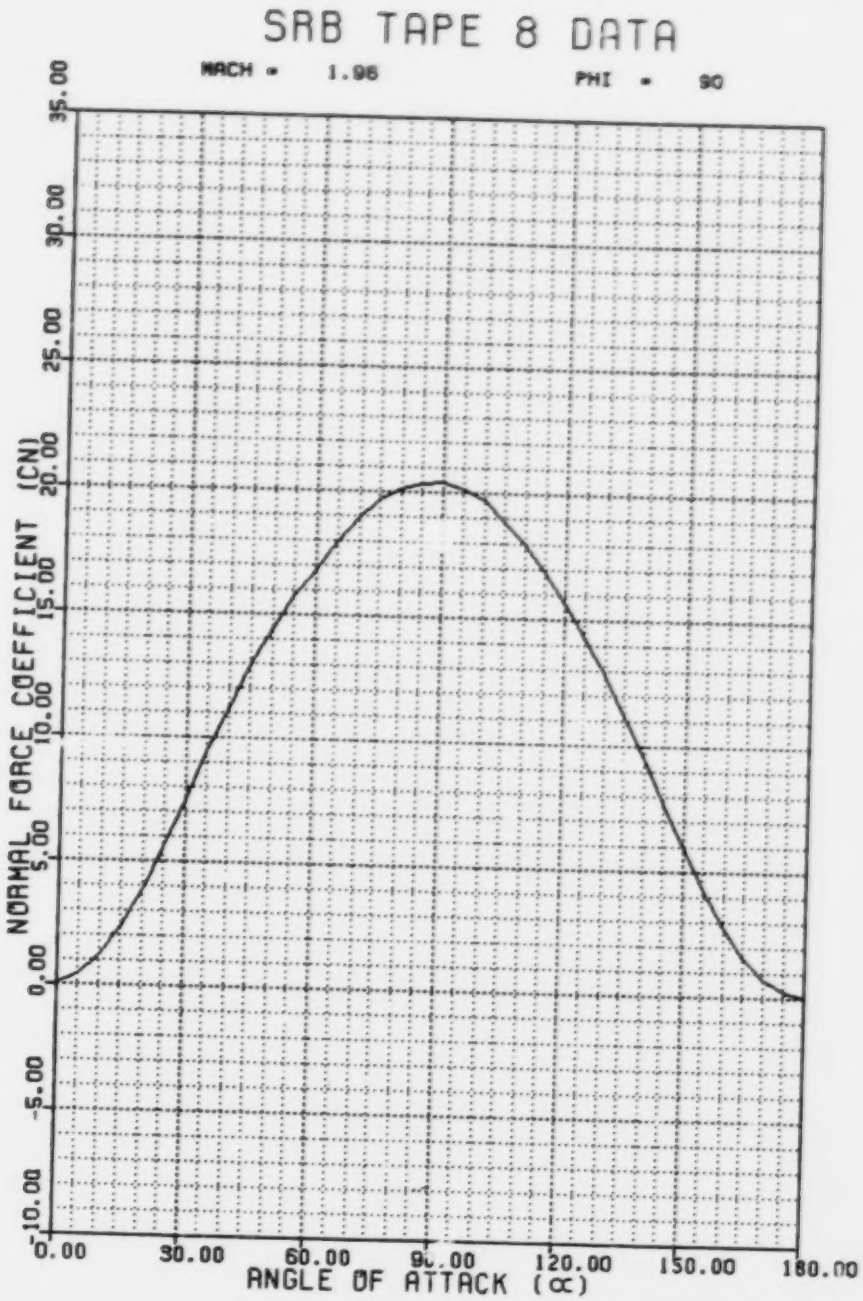
180.00
ANGLE OF ATTACK (α)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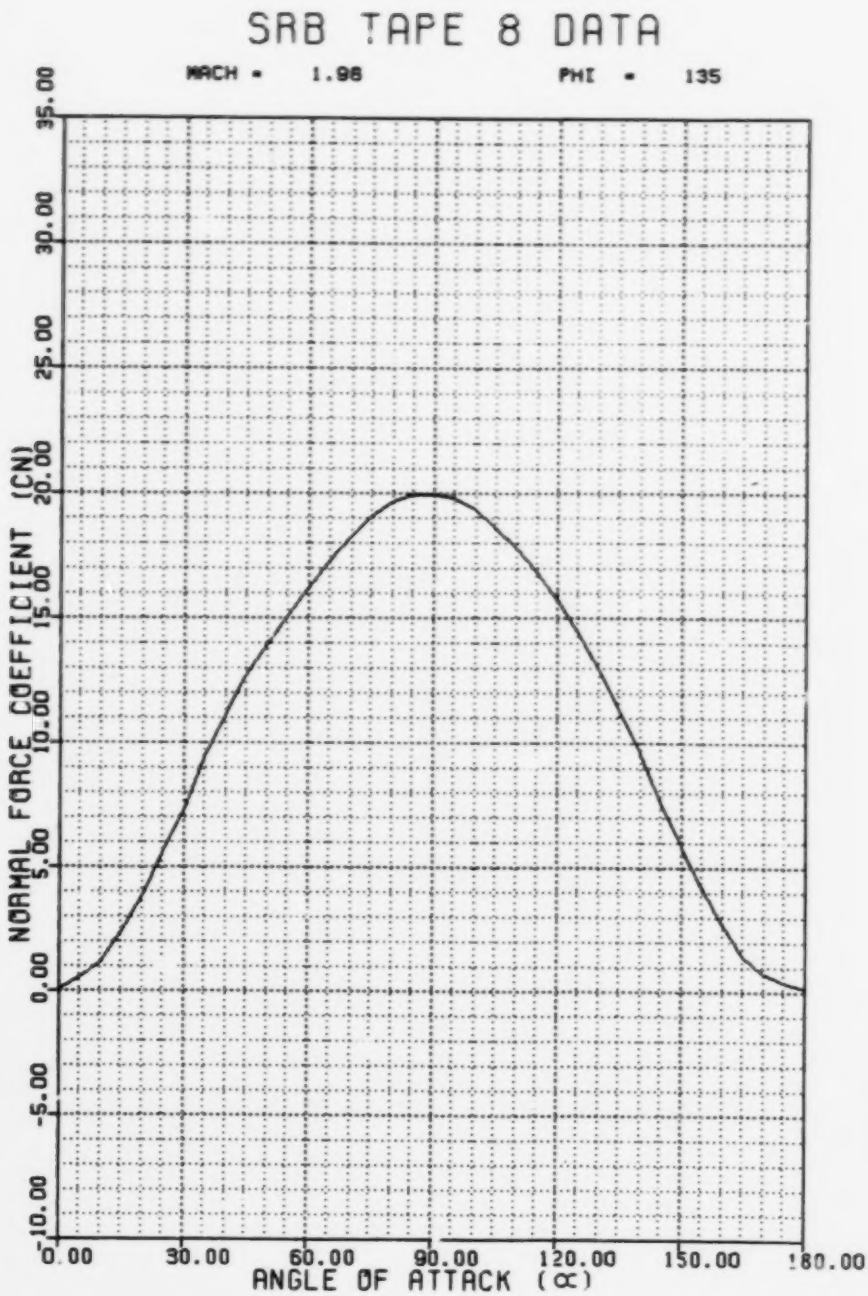
ANGLE OF ATTACK (α)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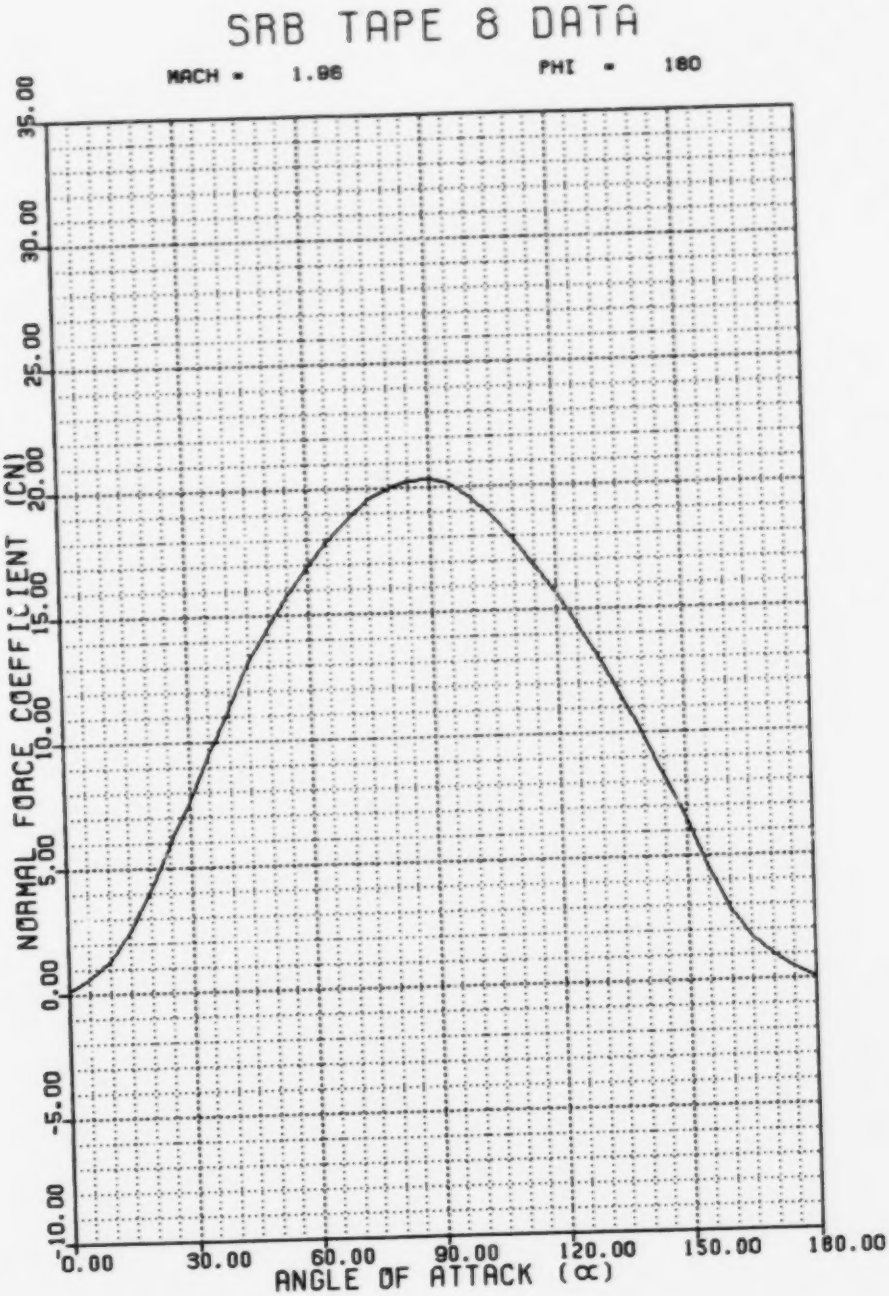
ANGLE OF ATTACK (α)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15.00
10.00
5.00
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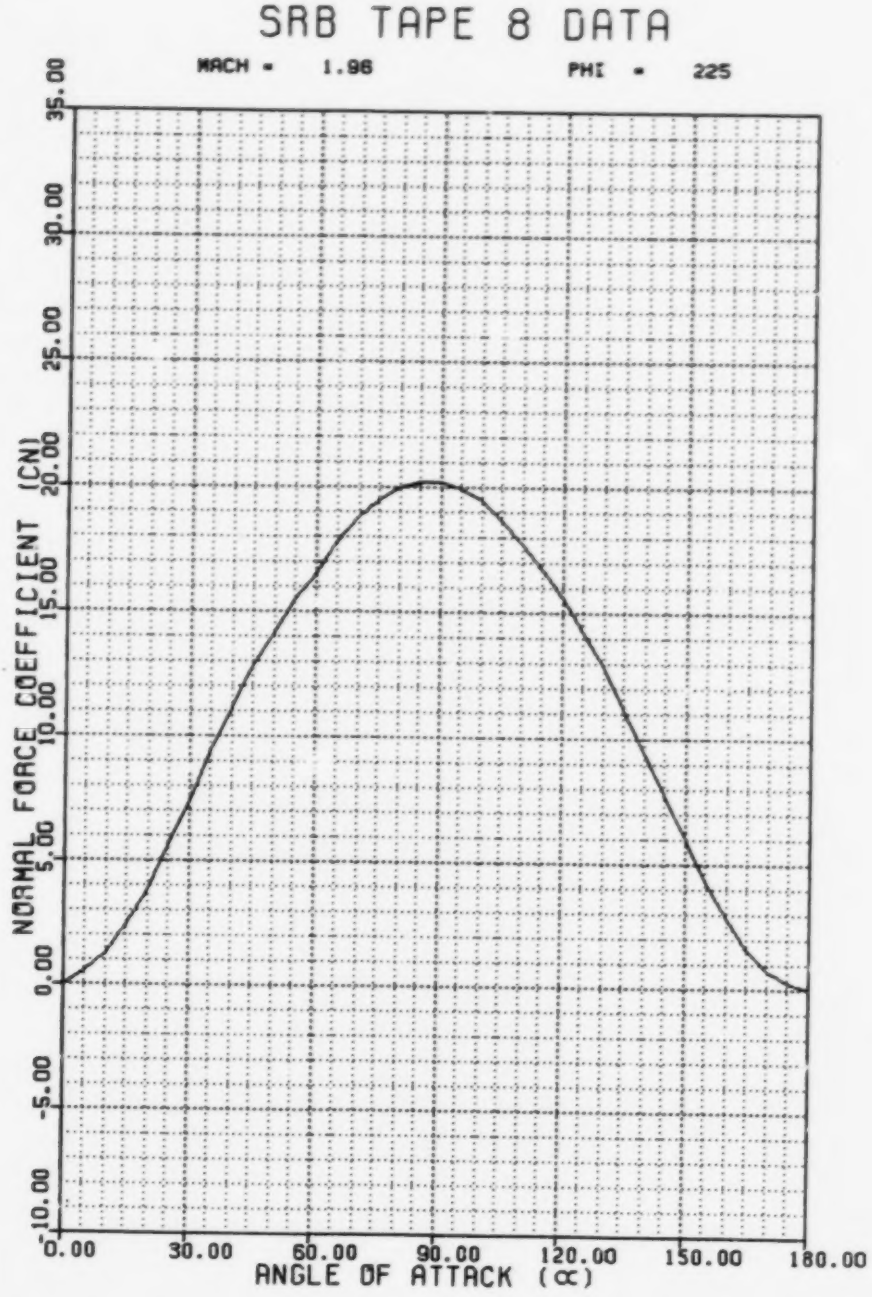
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
NORMAL FORCE COEFFICIENT (CN)
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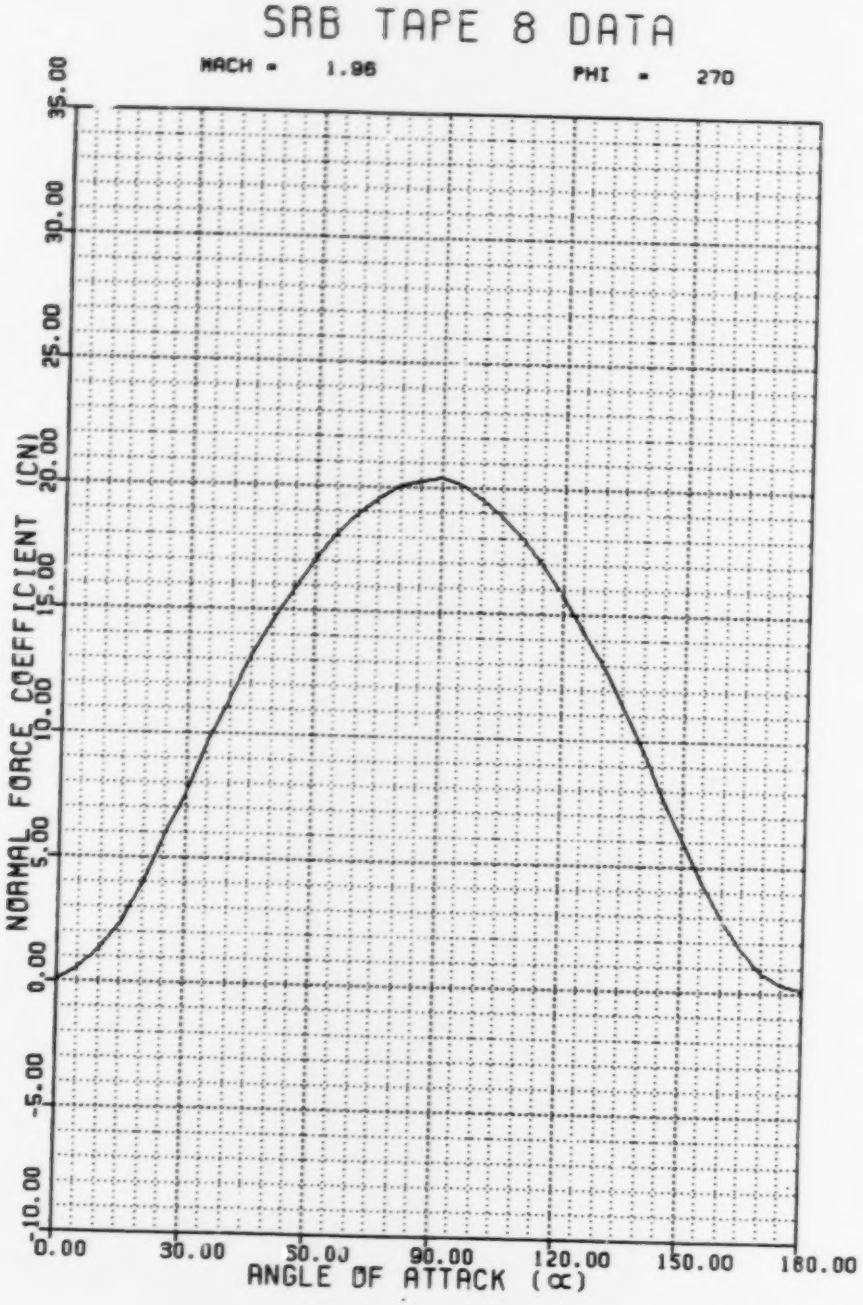
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 270
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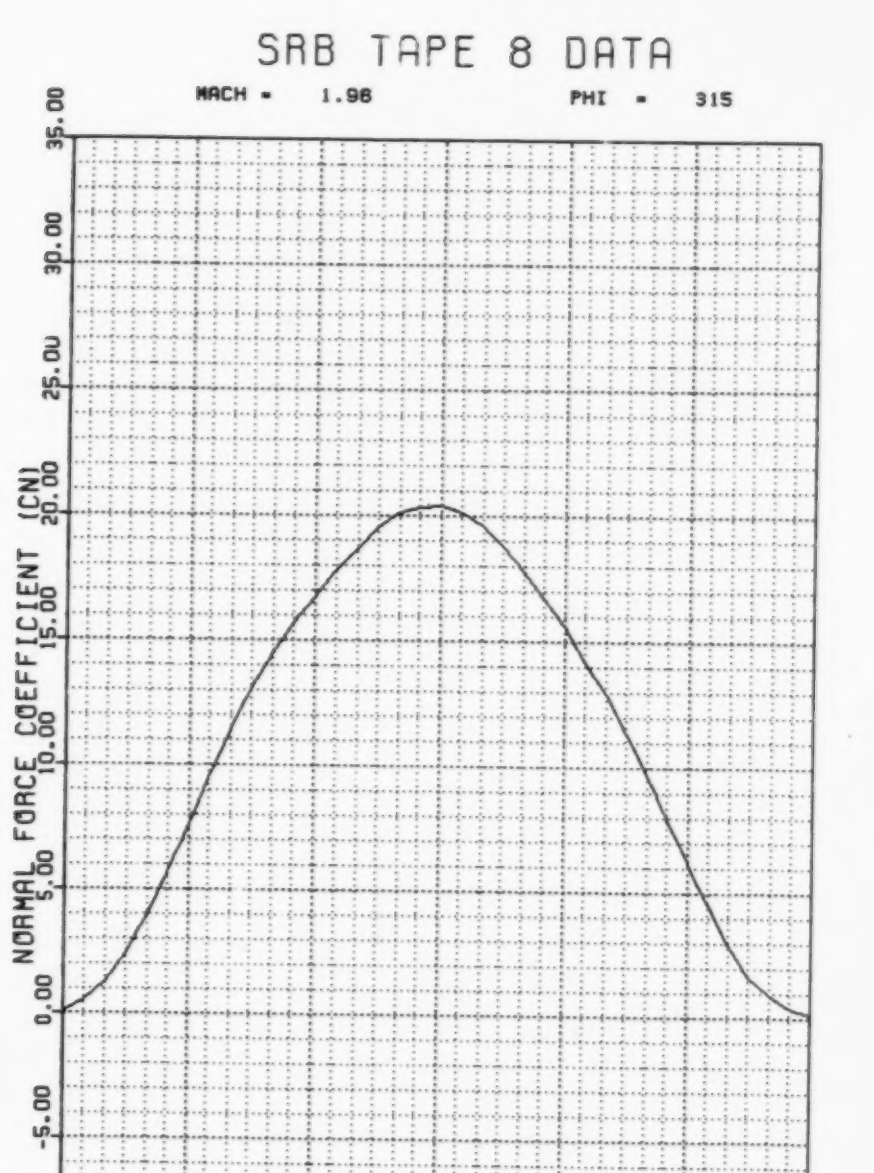
ANGLE OF ATTACK (α)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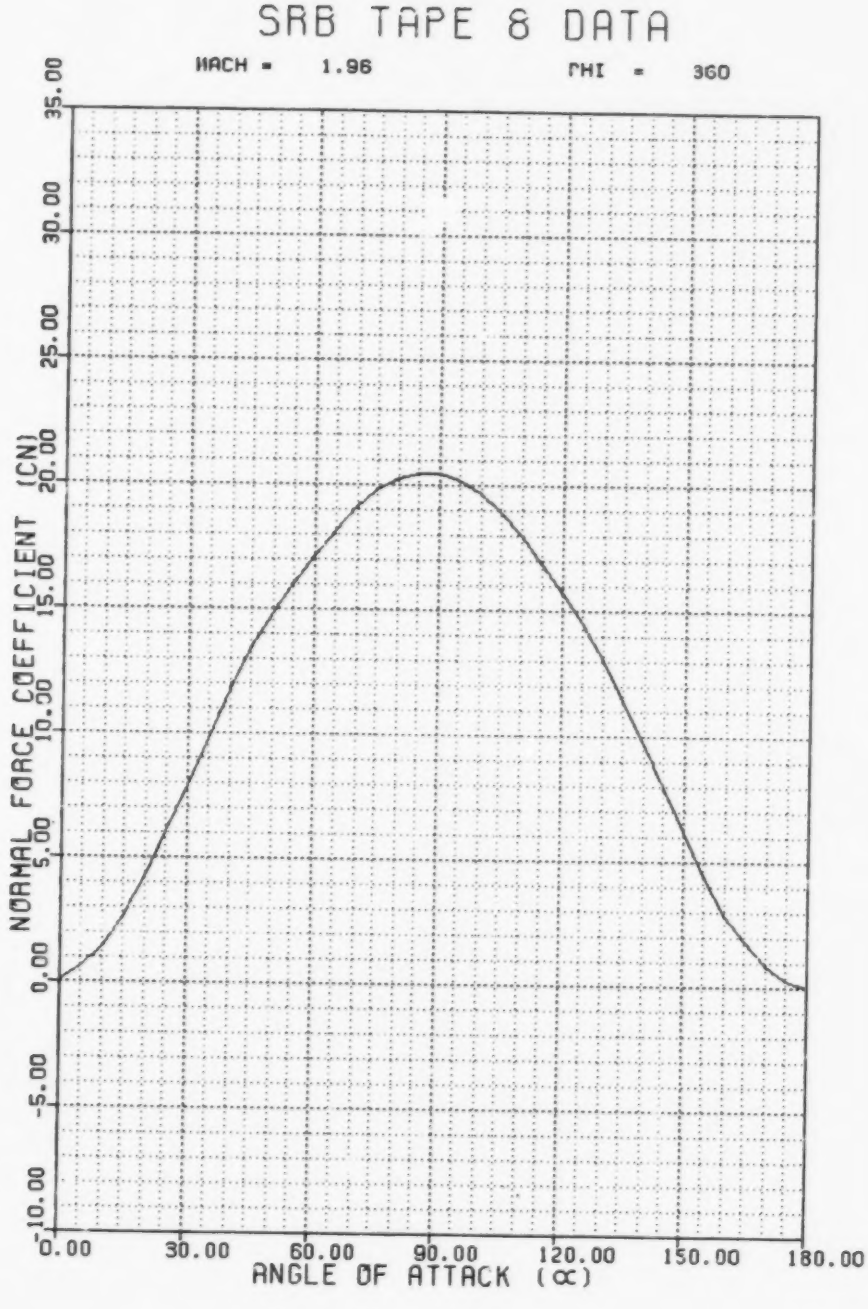
ANGLE OF ATTACK (α)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60.00
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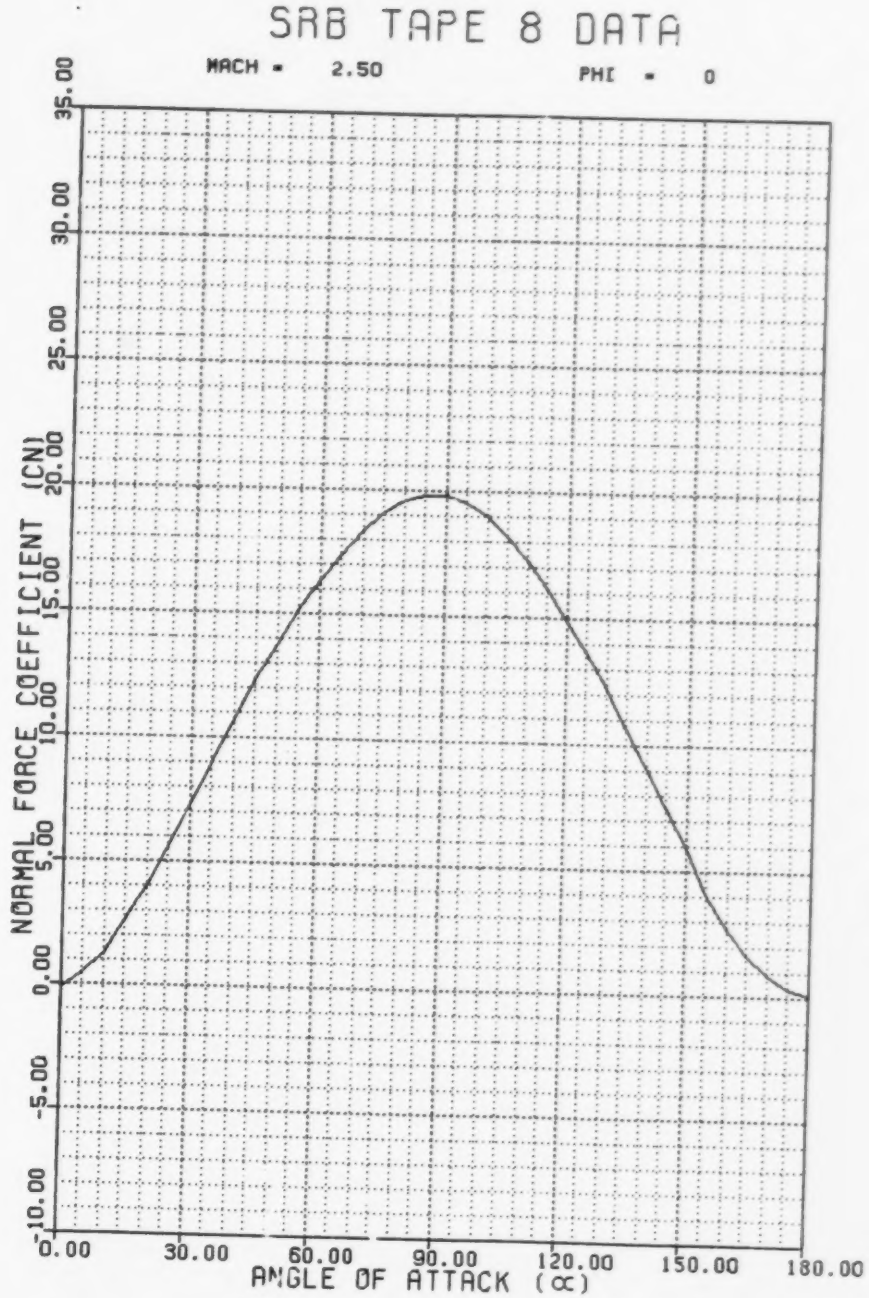
ANGLE OF ATTACK (α)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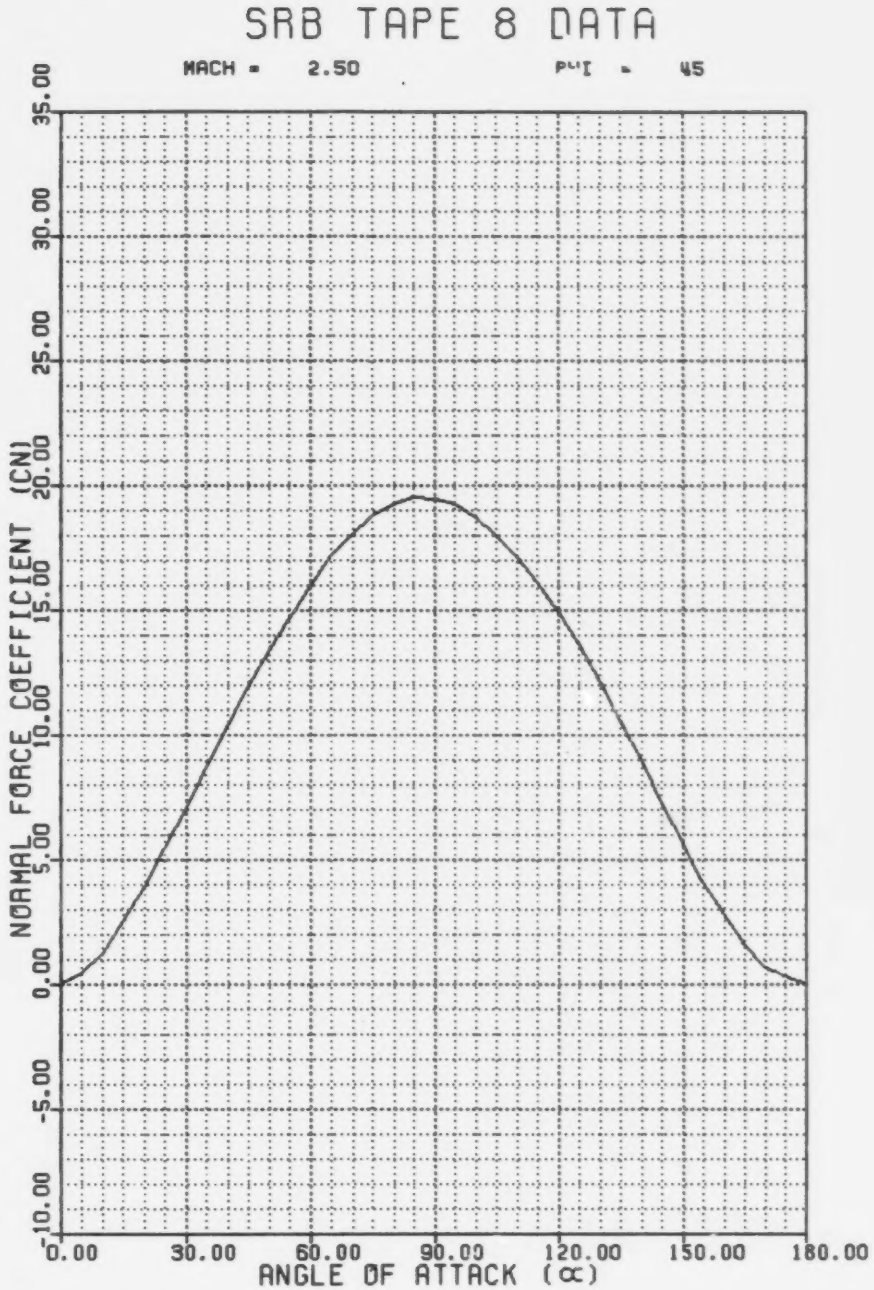
ANGLE OF ATTACK (α)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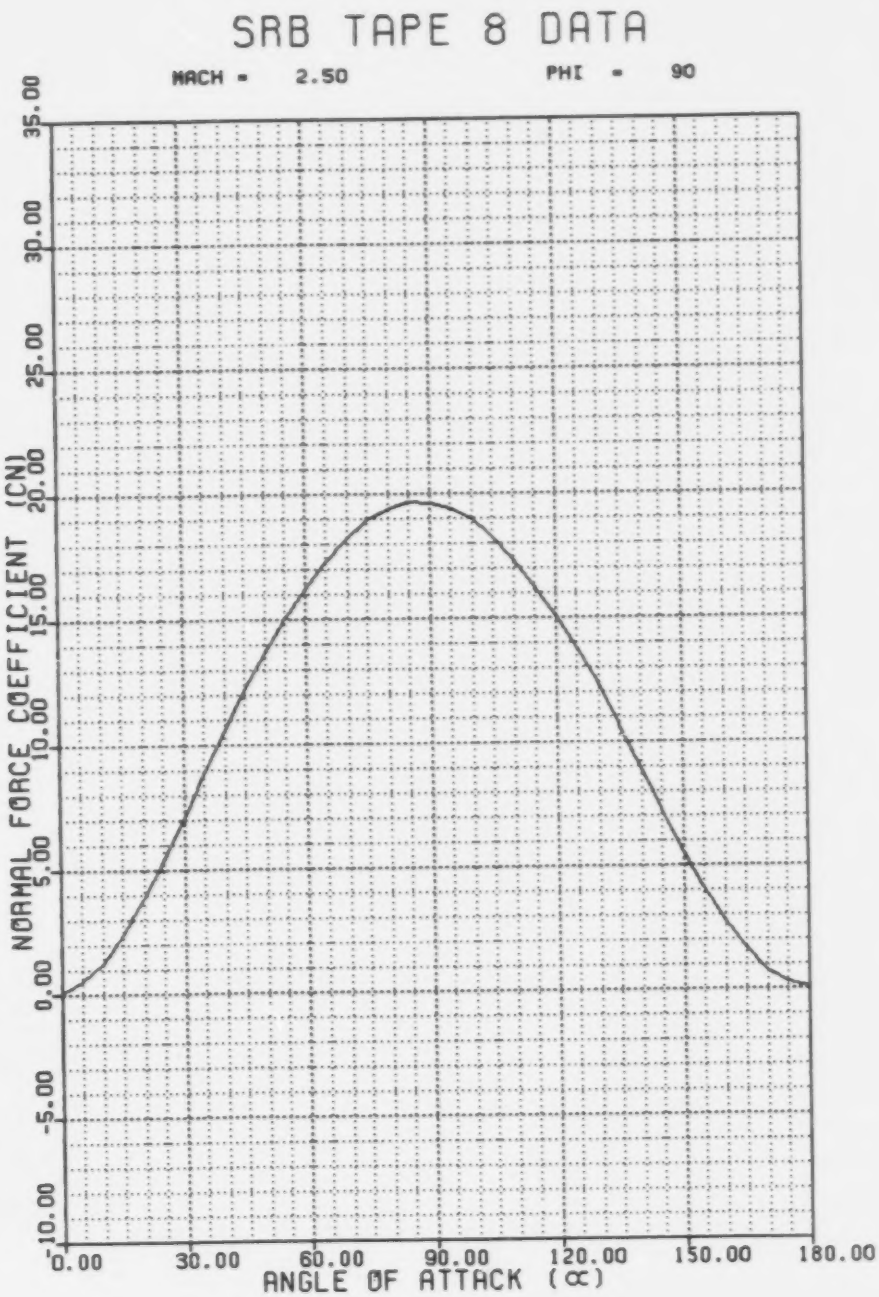
ANGLE OF ATTACK (α)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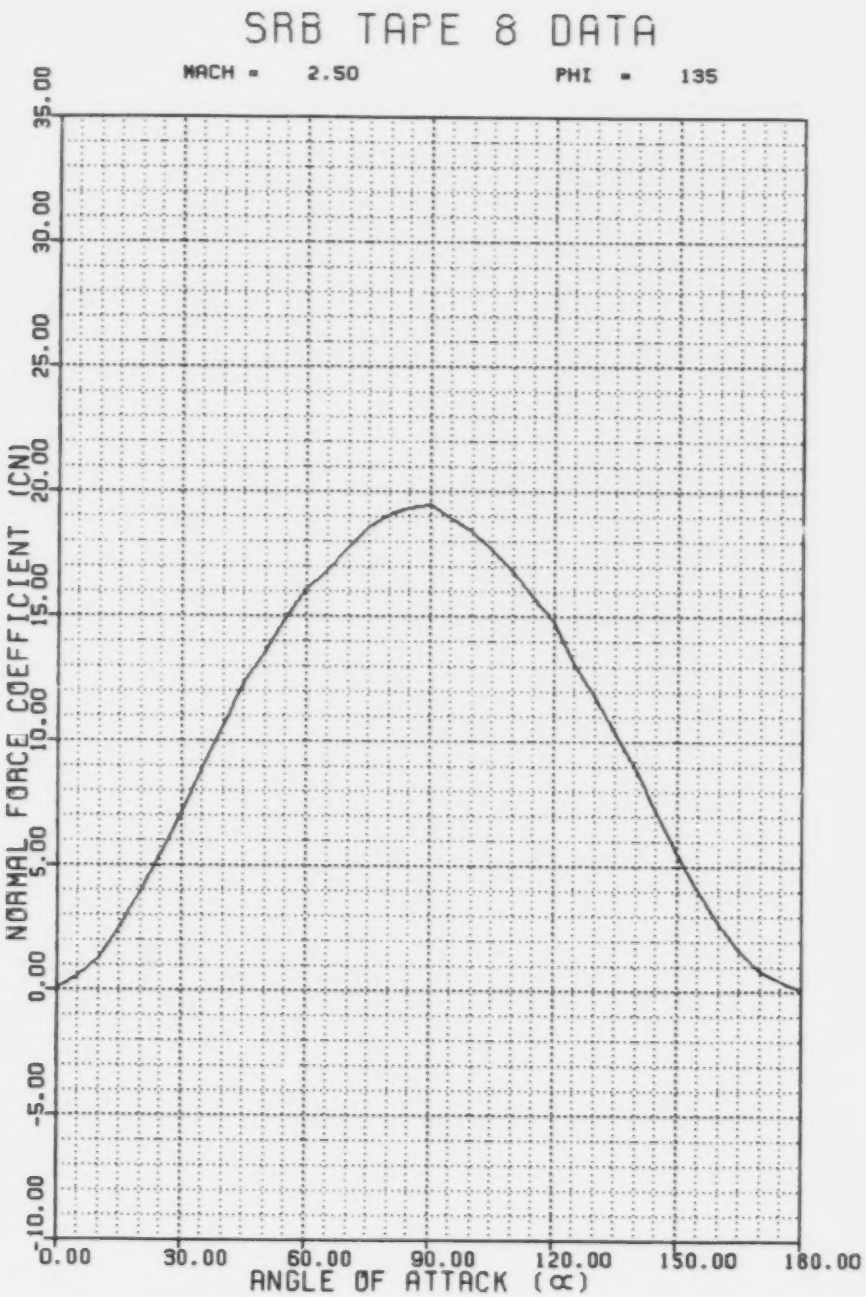
ANGLE OF ATTACK (α)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5.00
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60.00
90.00
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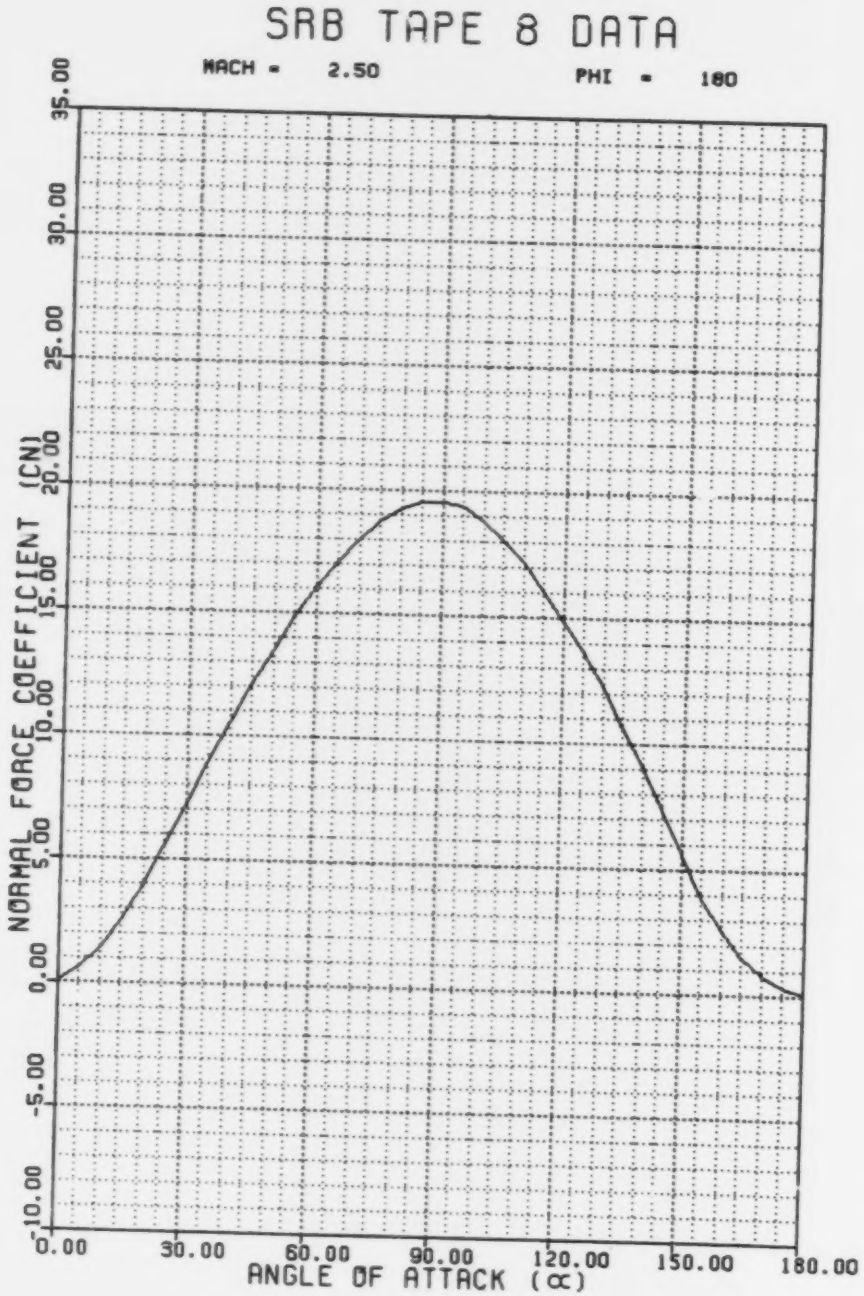
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
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120.00
150.00
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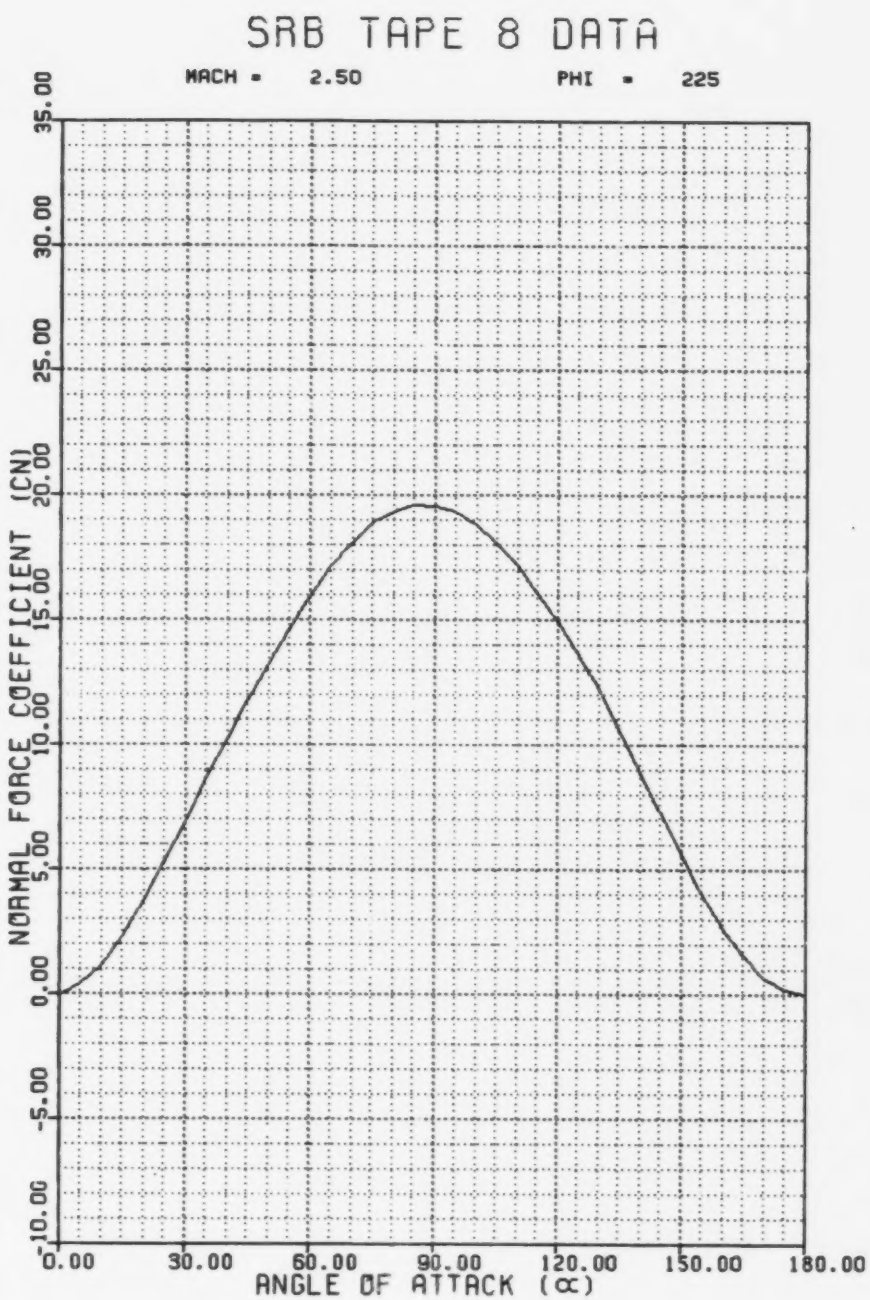
ANGLE OF ATTACK (α)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5.00
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0.00
30.00
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90.00
120.00
150.00
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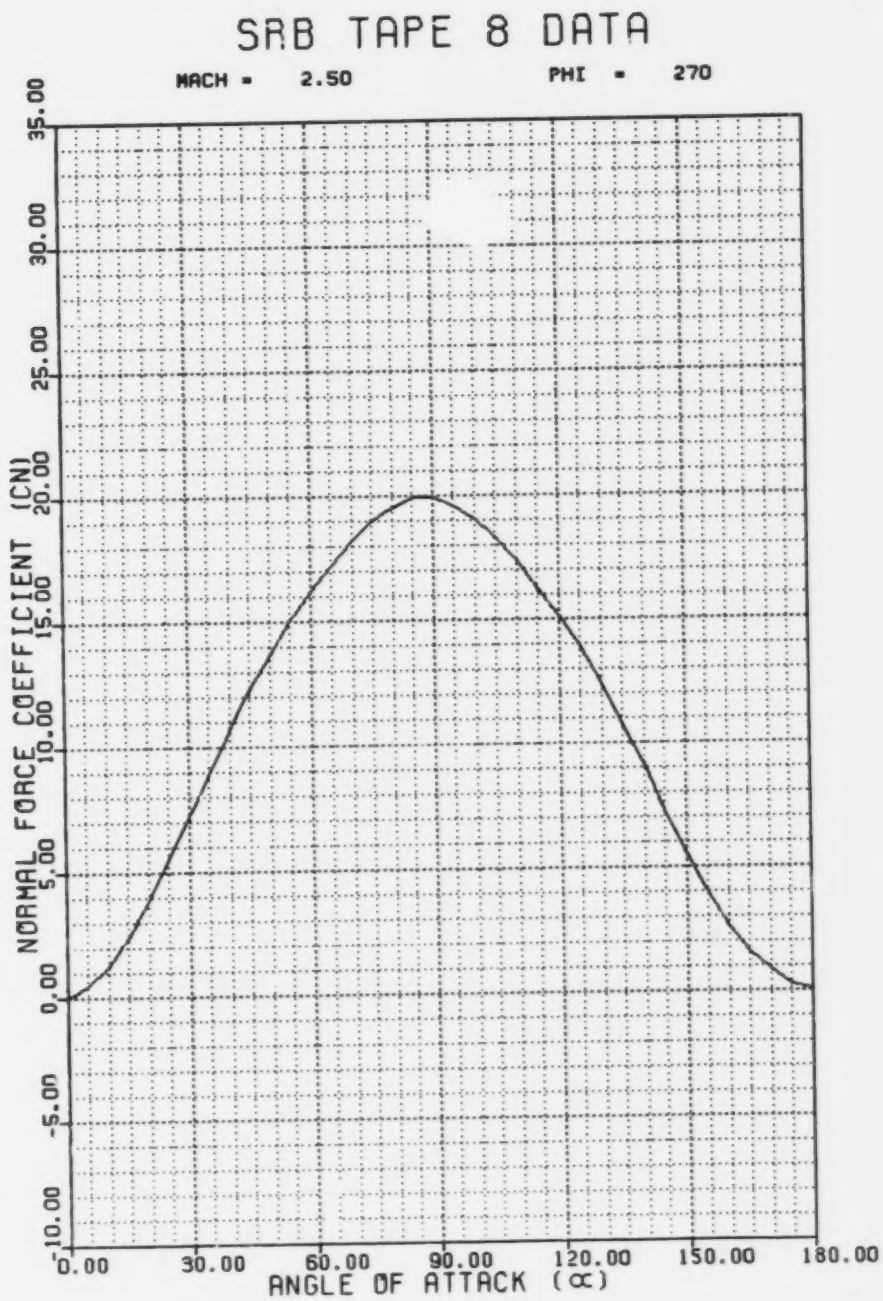
ANGLE OF ATTACK (α)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60.00
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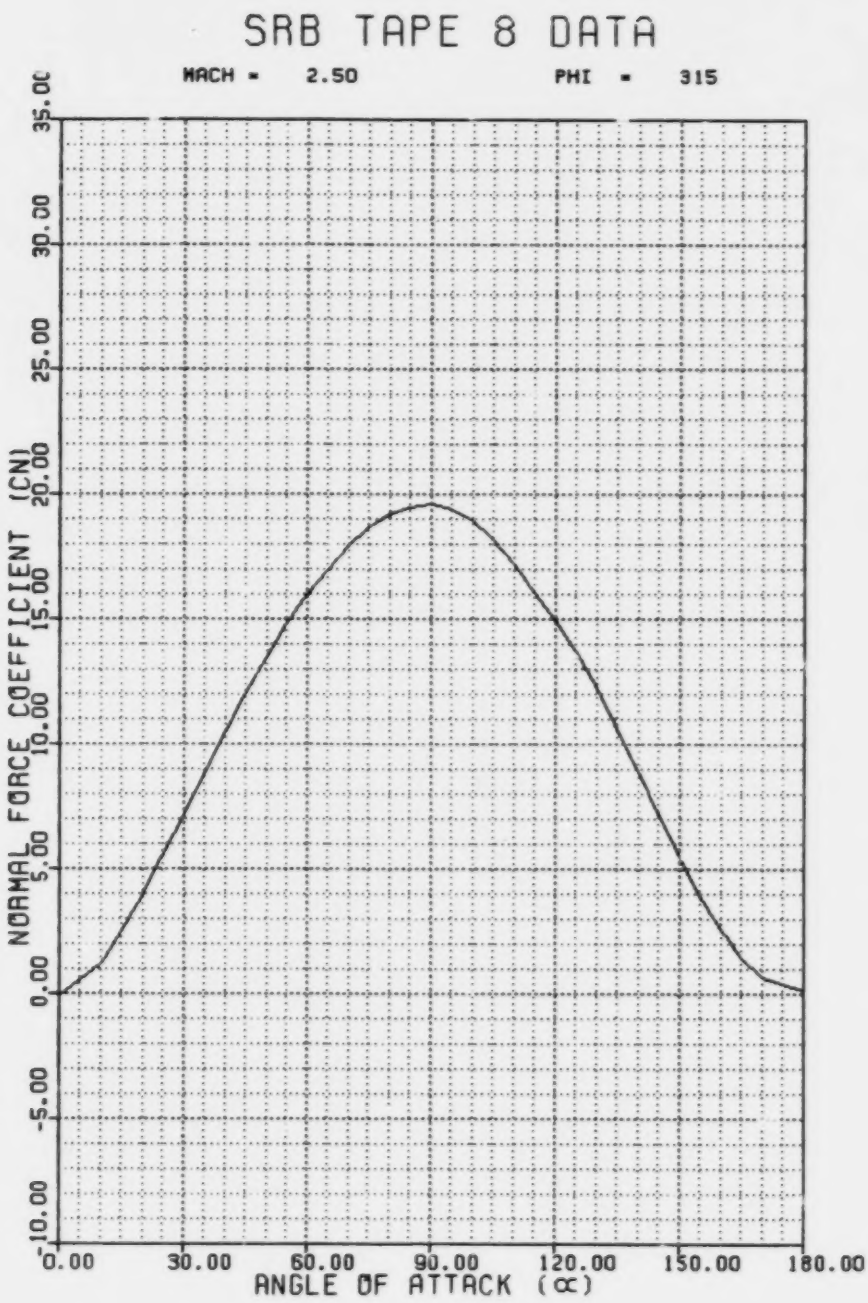
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 315
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0.00
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60.00
90.00
120.00
150.00
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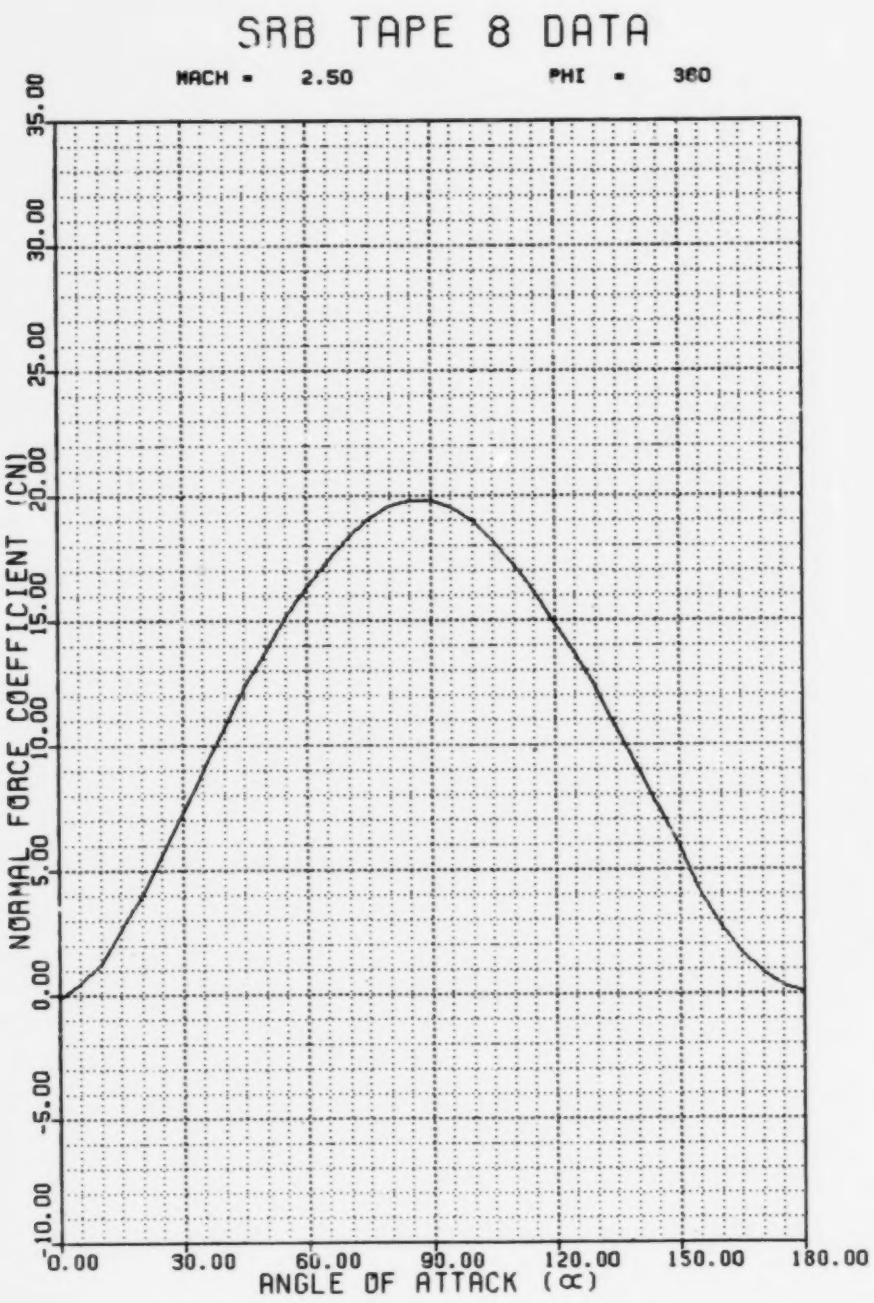
ANGLE OF ATTACK (α)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90.00
120.00
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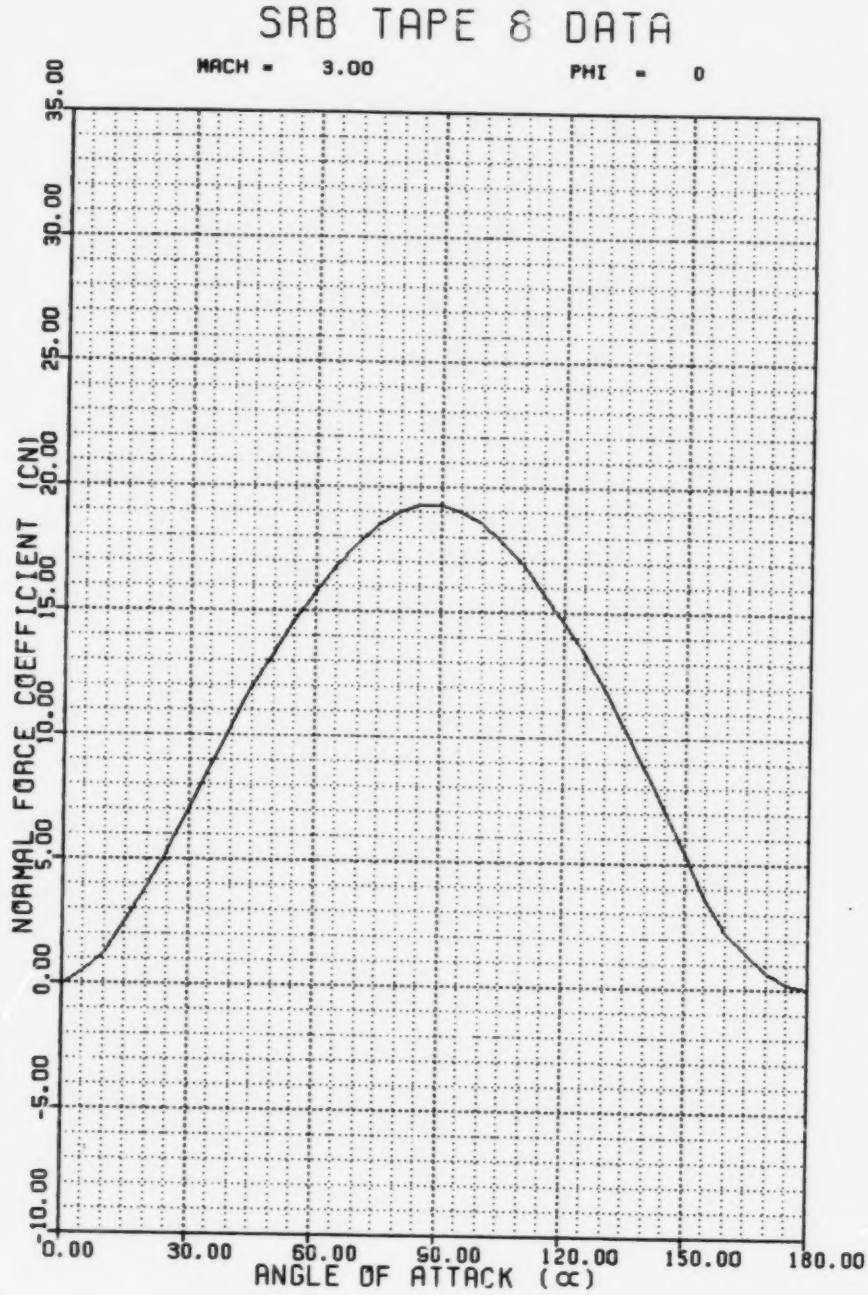
ANGLE OF ATTACK (α)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60.00
90.00
120.00
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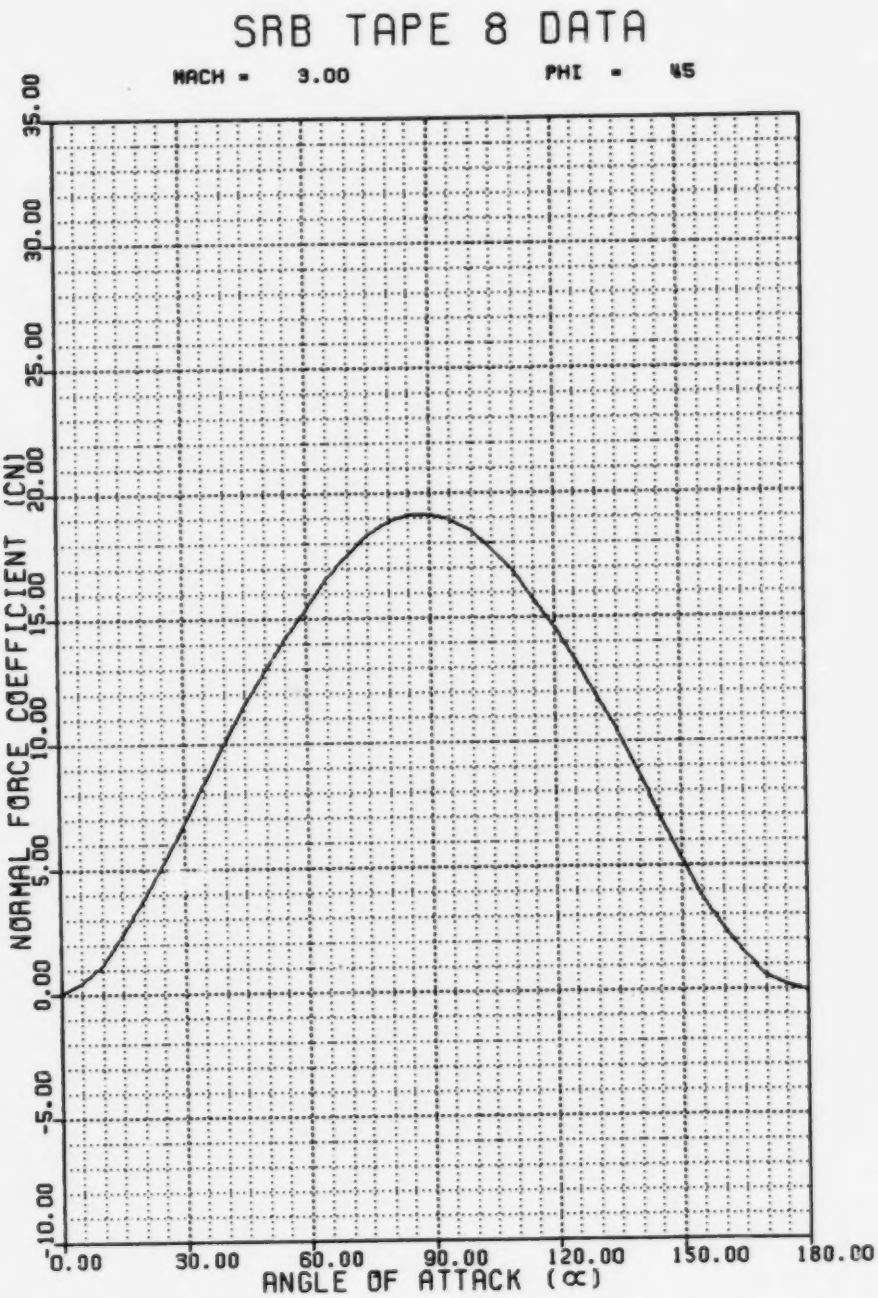
ANGLE OF ATTACK (α)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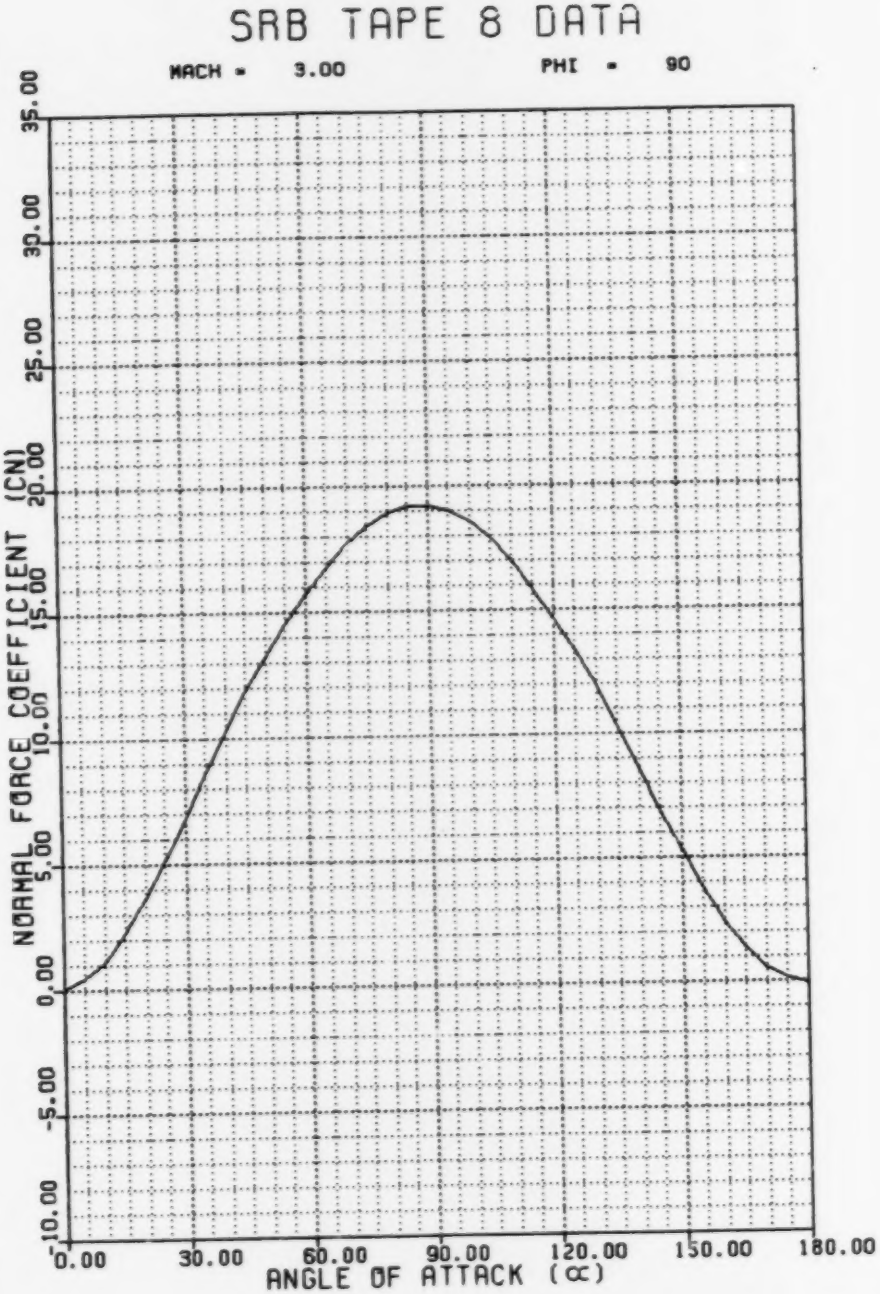
ANGLE OF ATTACK (α)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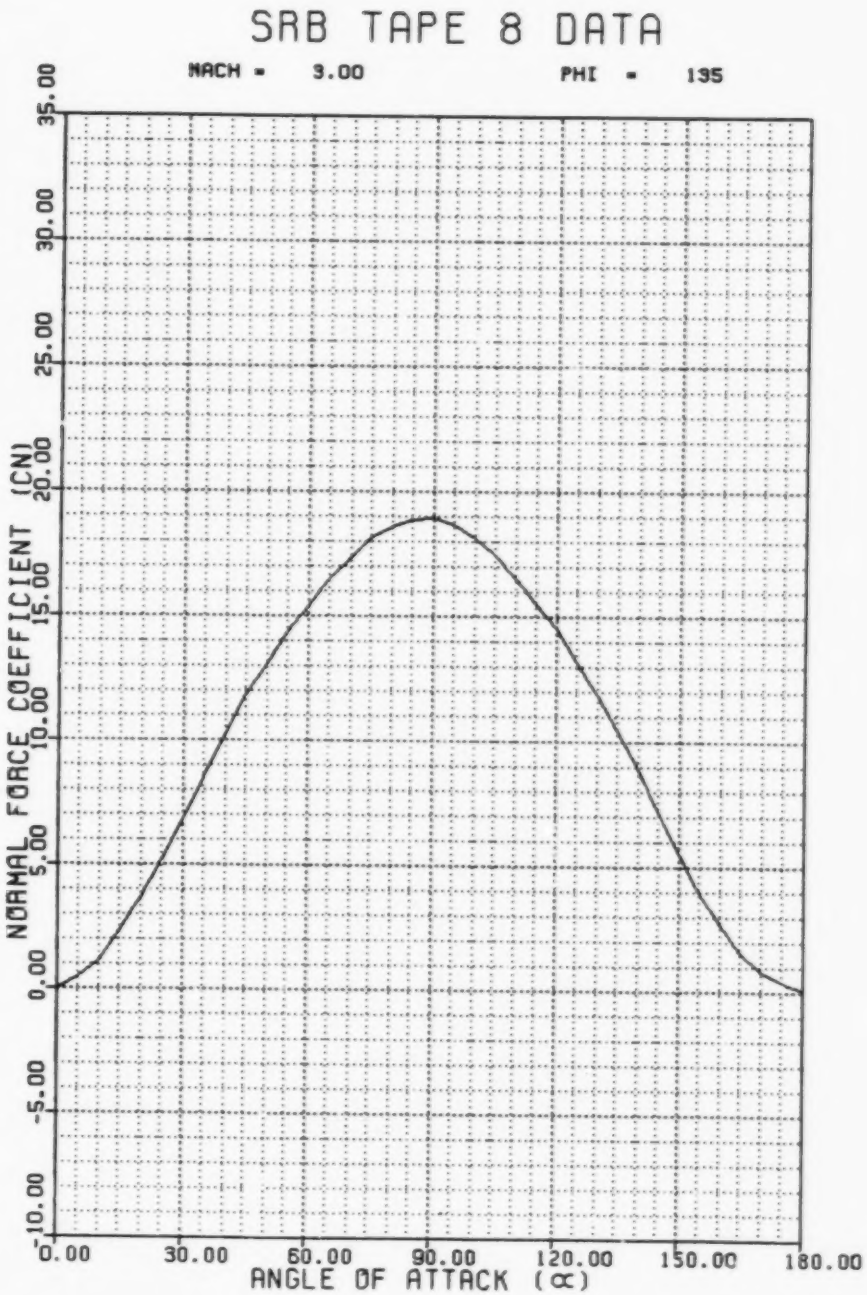
ANGLE OF ATTACK (α)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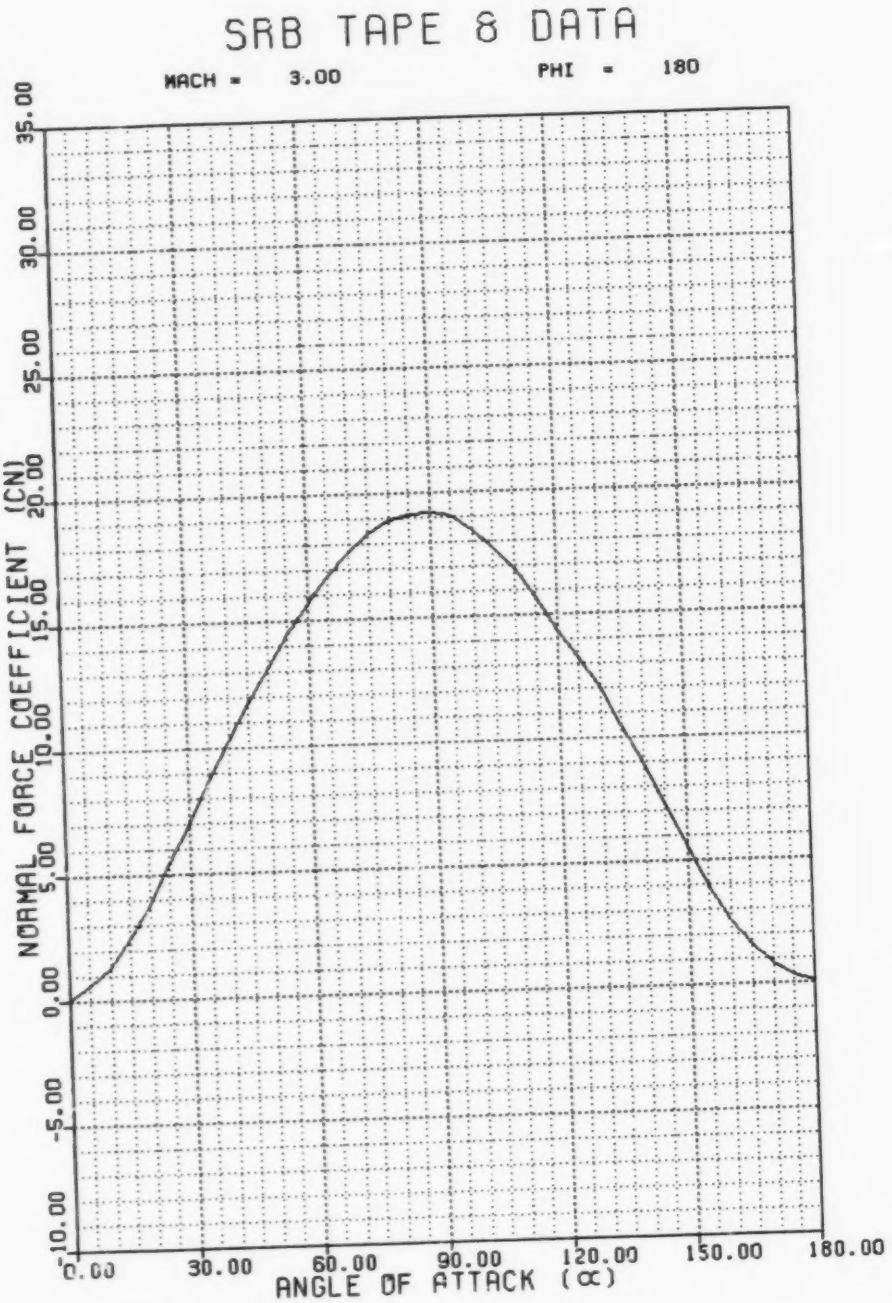
ANGLE OF ATTACK (α)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MACH = 3.00
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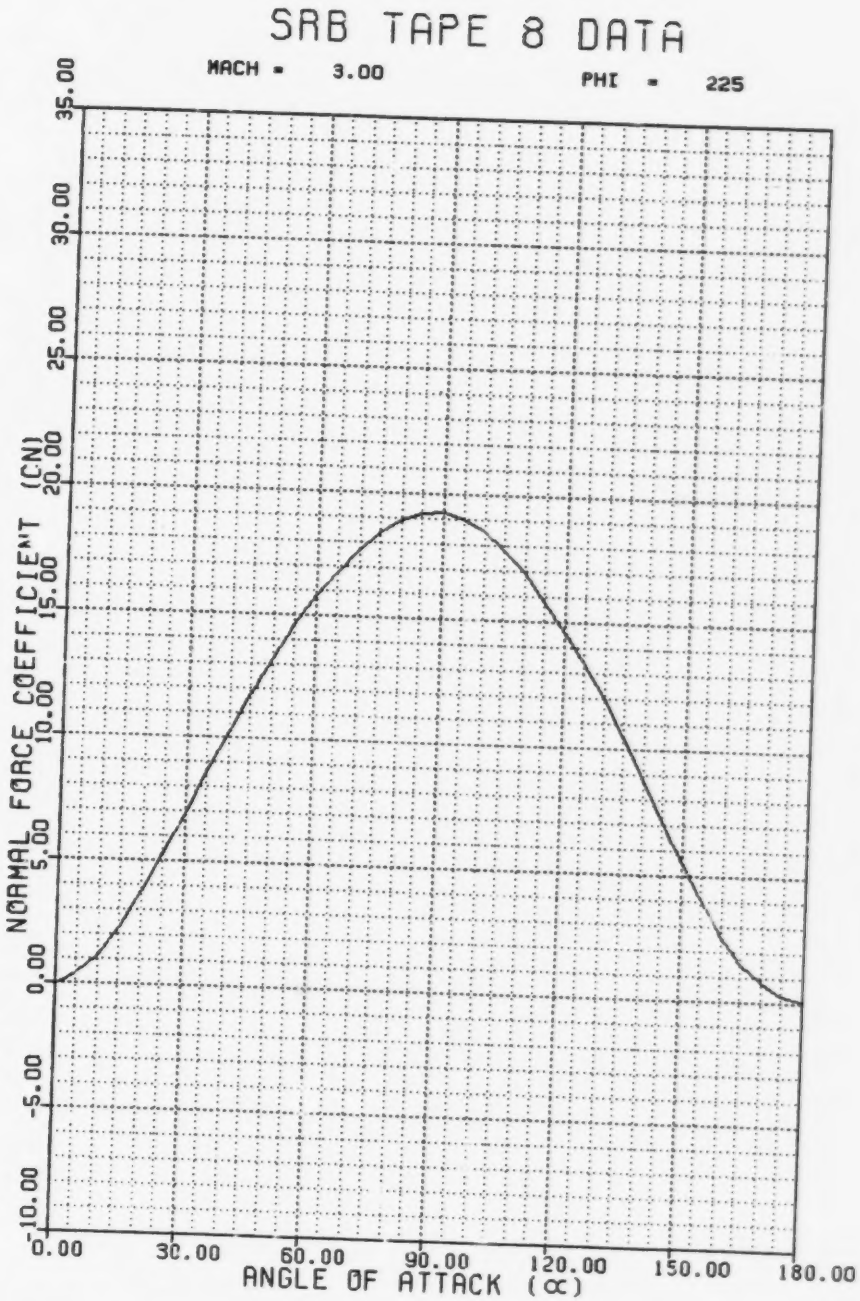
ANGLE OF ATTACK (α)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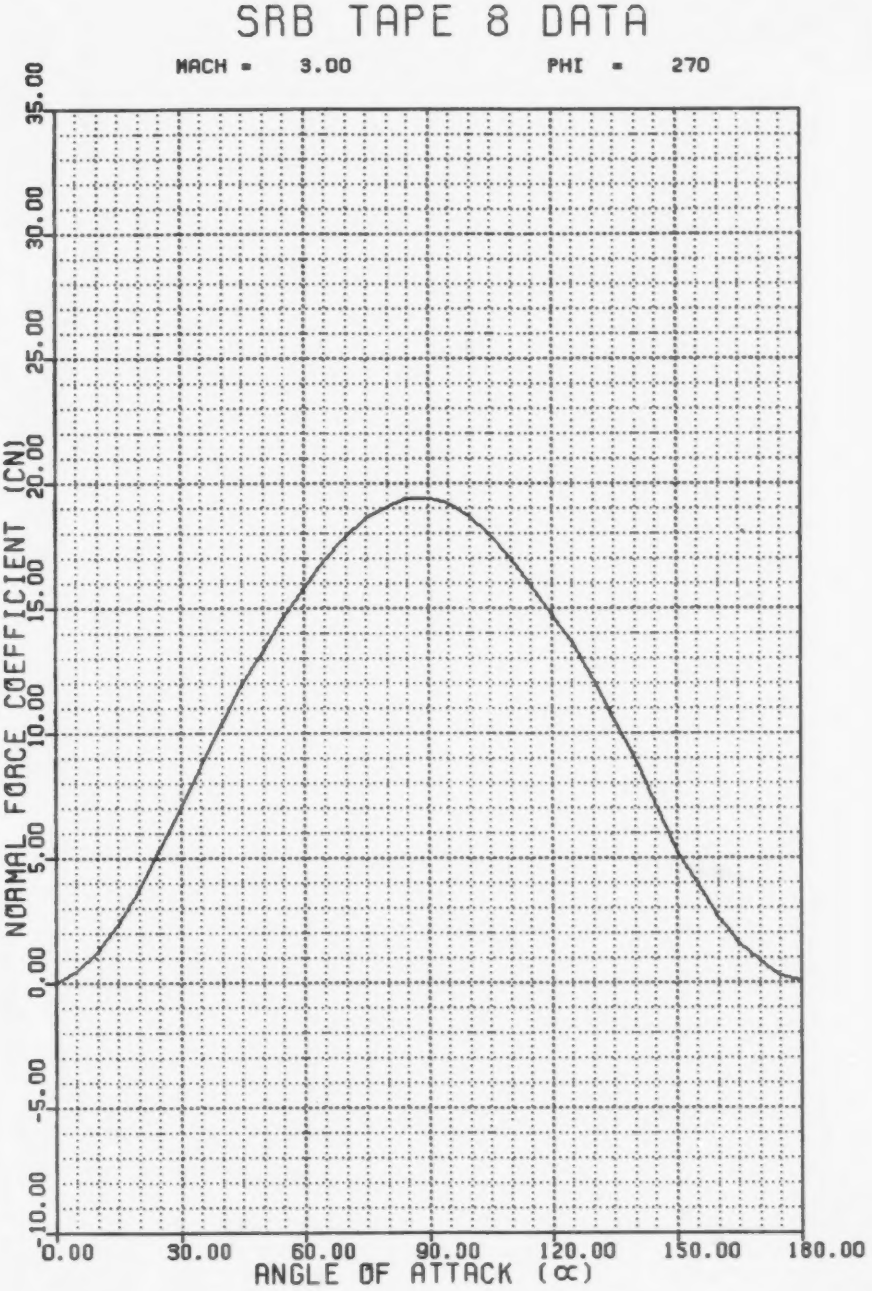
ANGLE OF ATTACK (α)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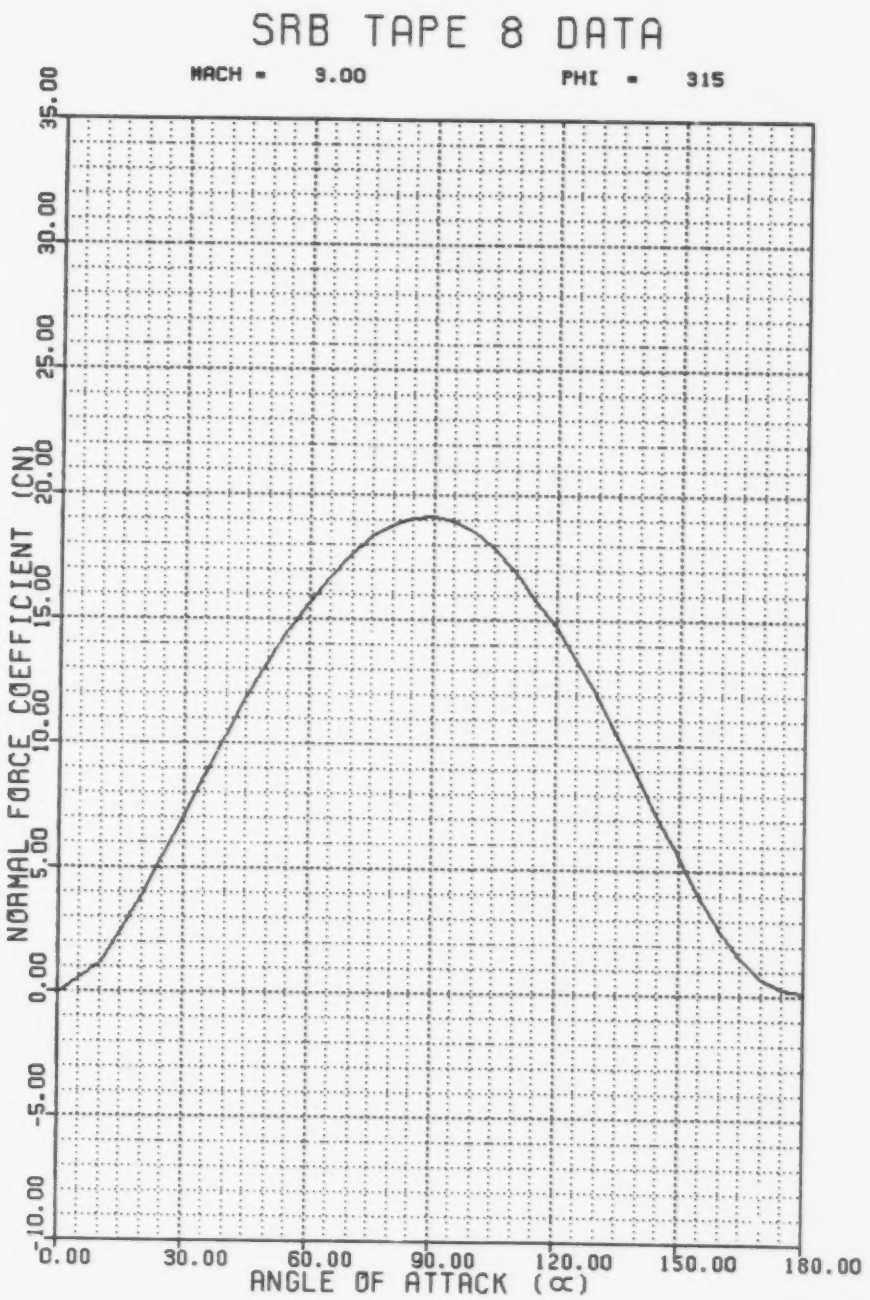
ANGLE OF ATTACK (α)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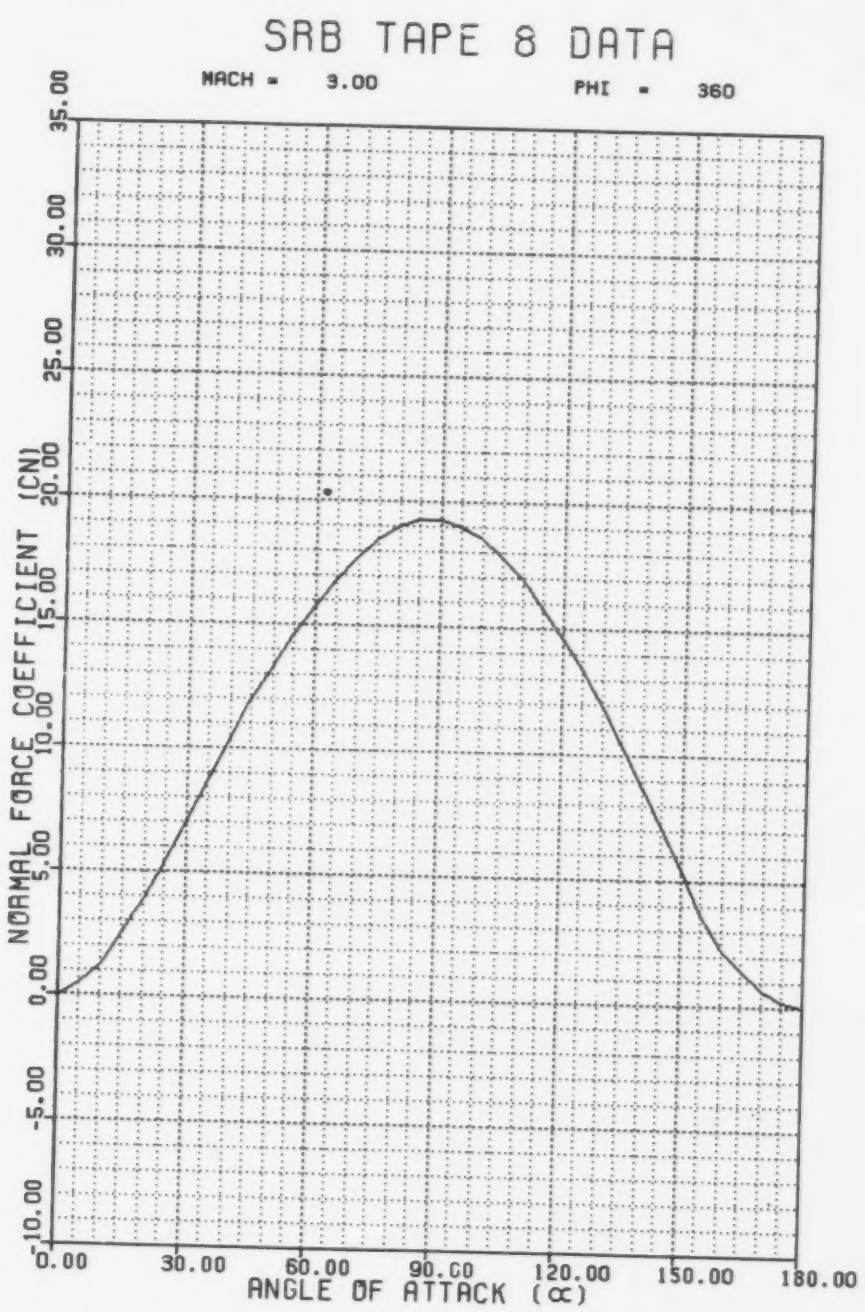
ANGLE OF ATTACK (α)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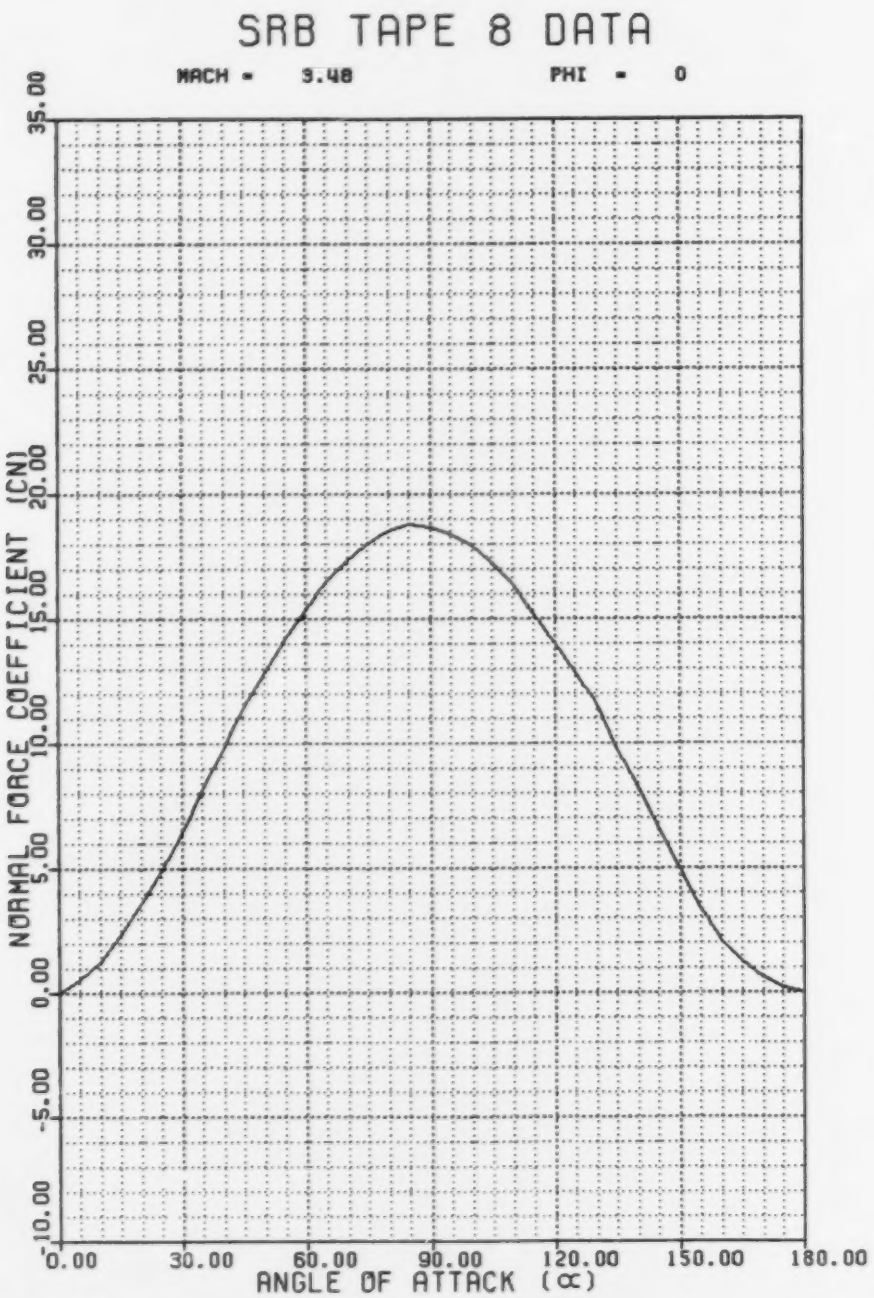
ANGLE OF ATTACK (α)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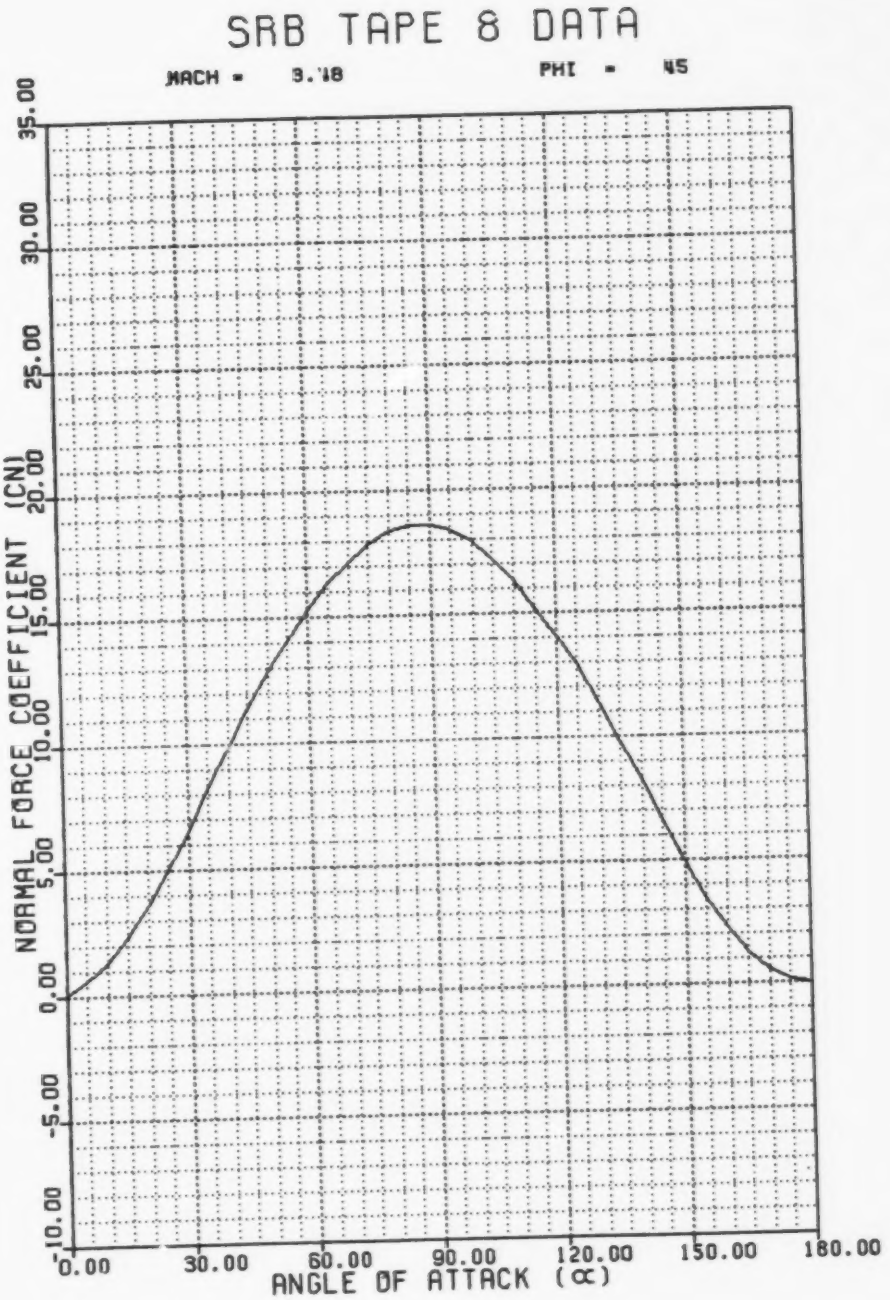
ANGLE OF ATTACK (α)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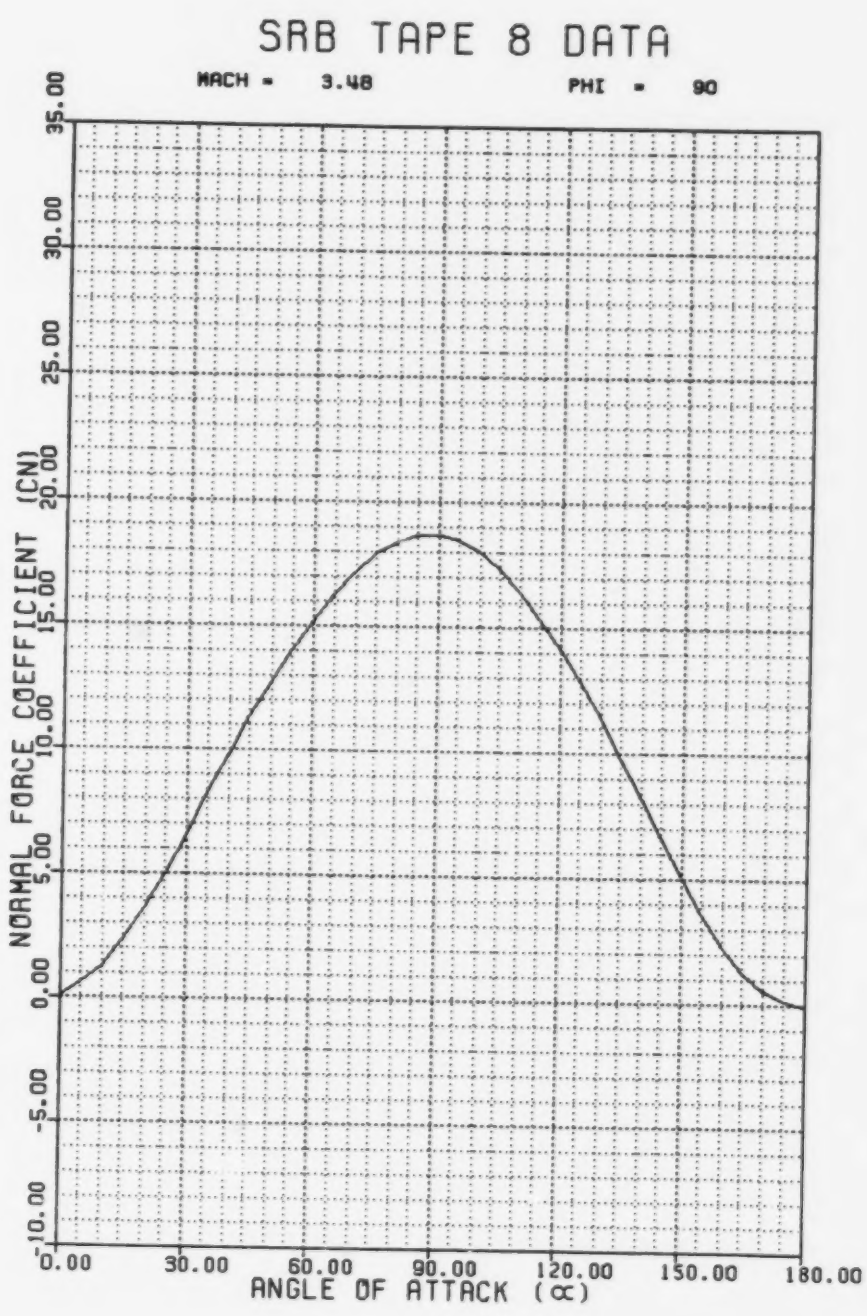
ANGLE OF ATTACK (α)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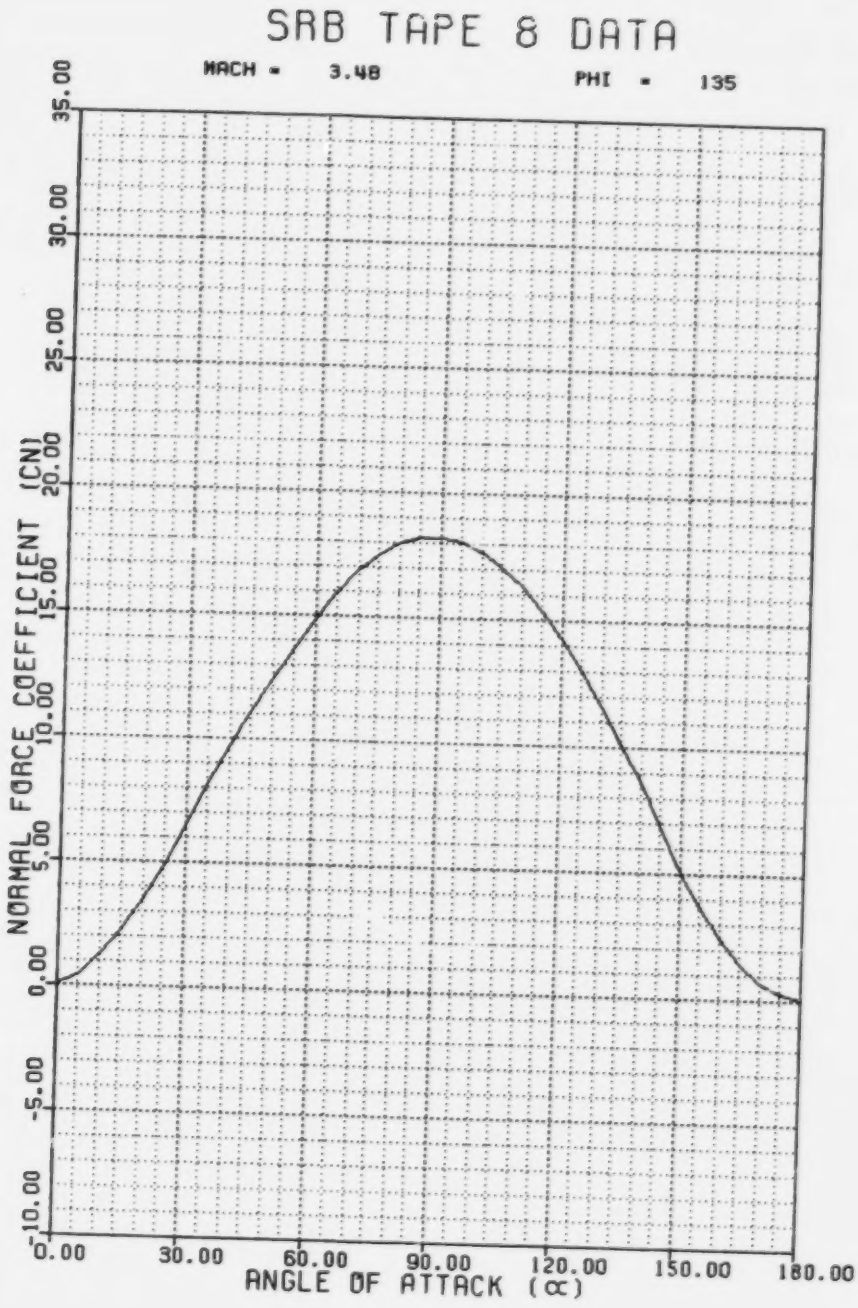
ANGLE OF ATTACK (α)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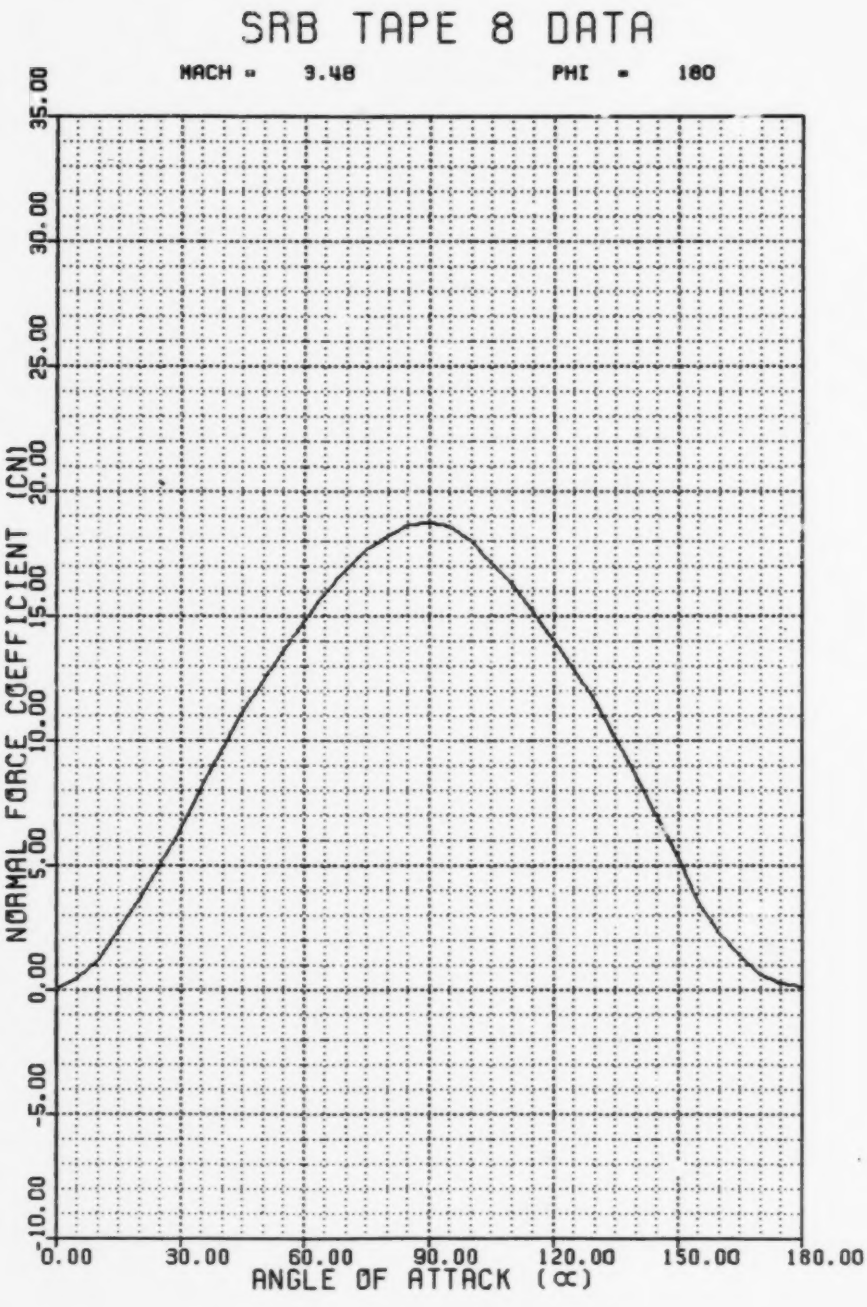
ANGLE OF ATTACK (α)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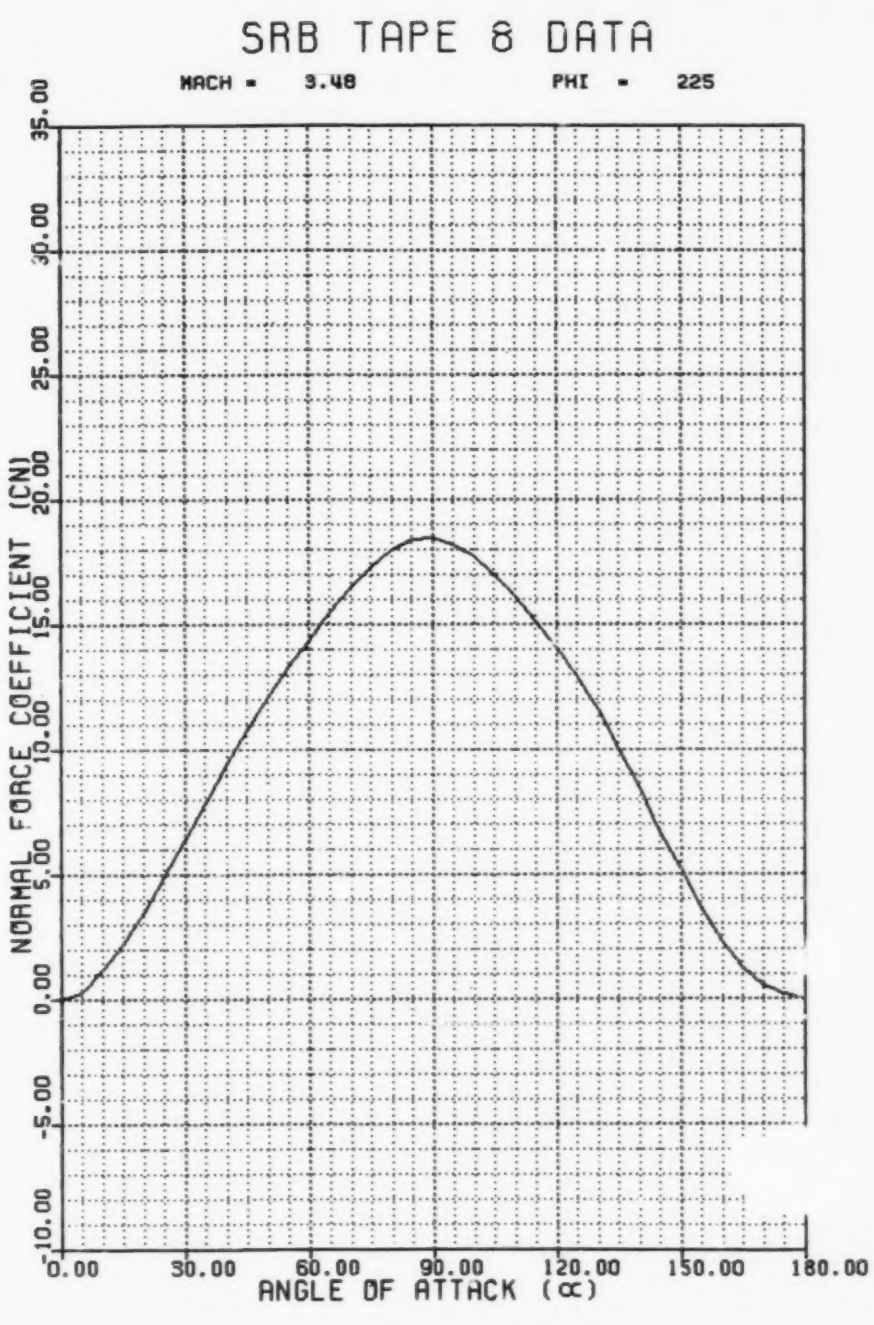
150.00
180.00
ANGLE OF ATTACK (α)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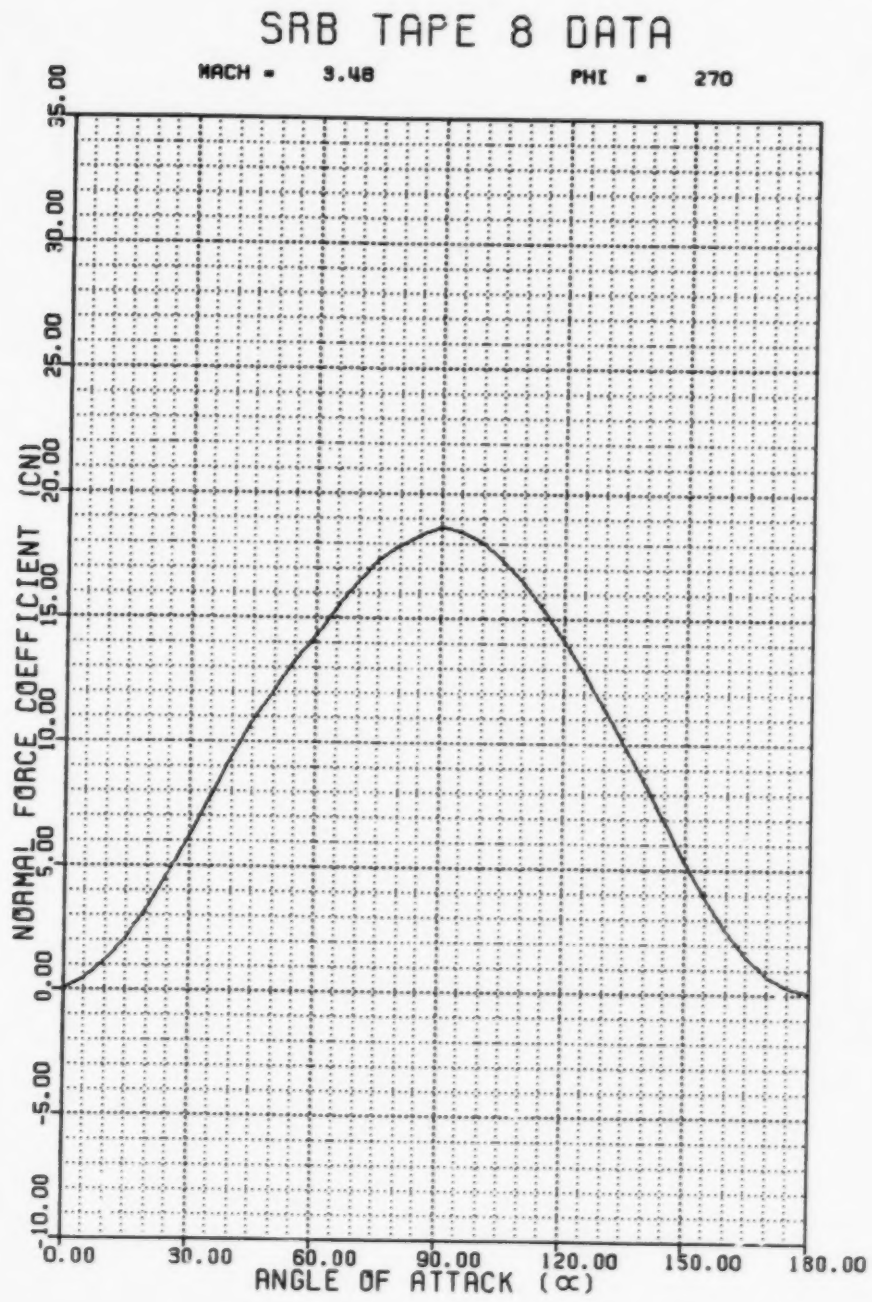
180.00
ANGLE OF ATTACK (α)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MACH = 3.48
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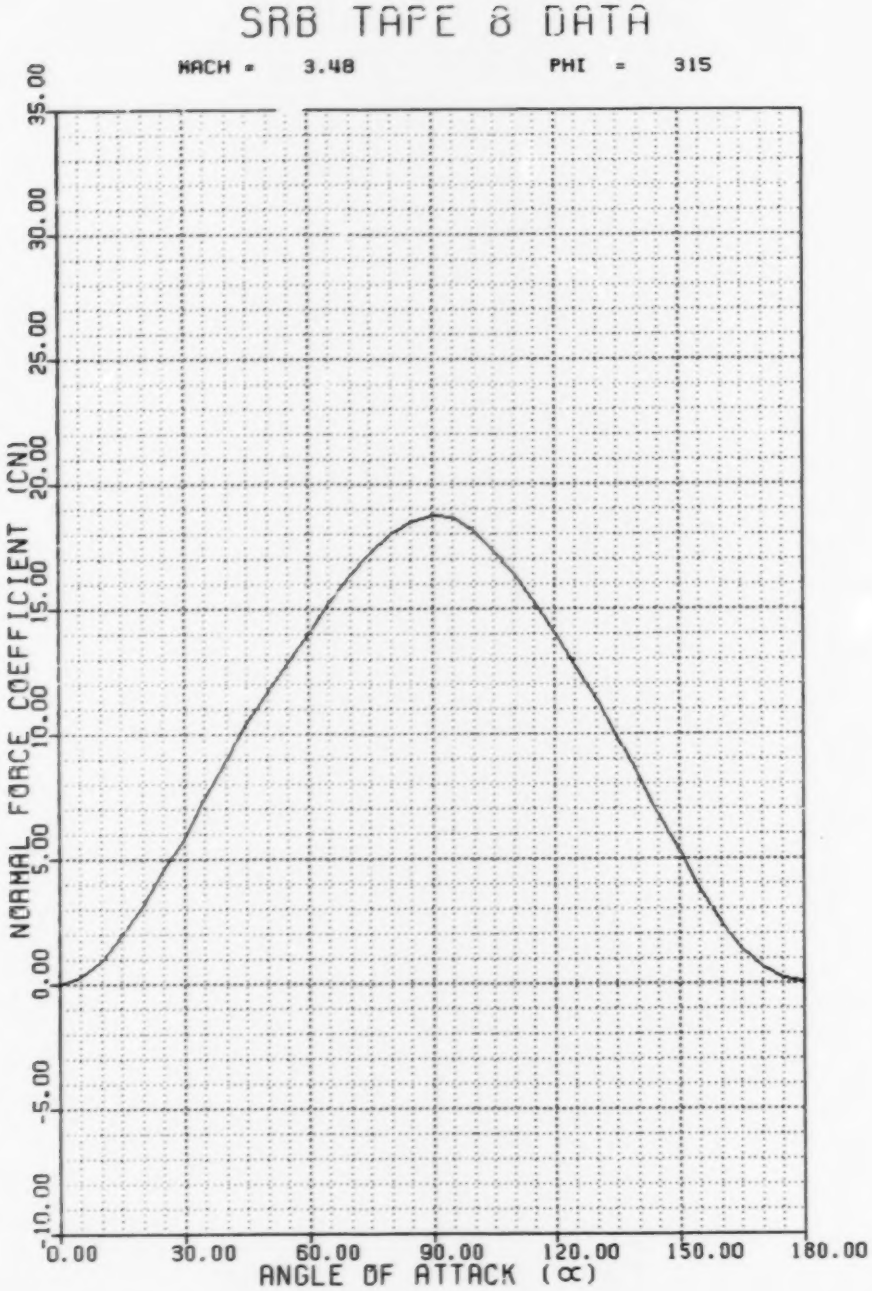
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 315
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10.00
5.00
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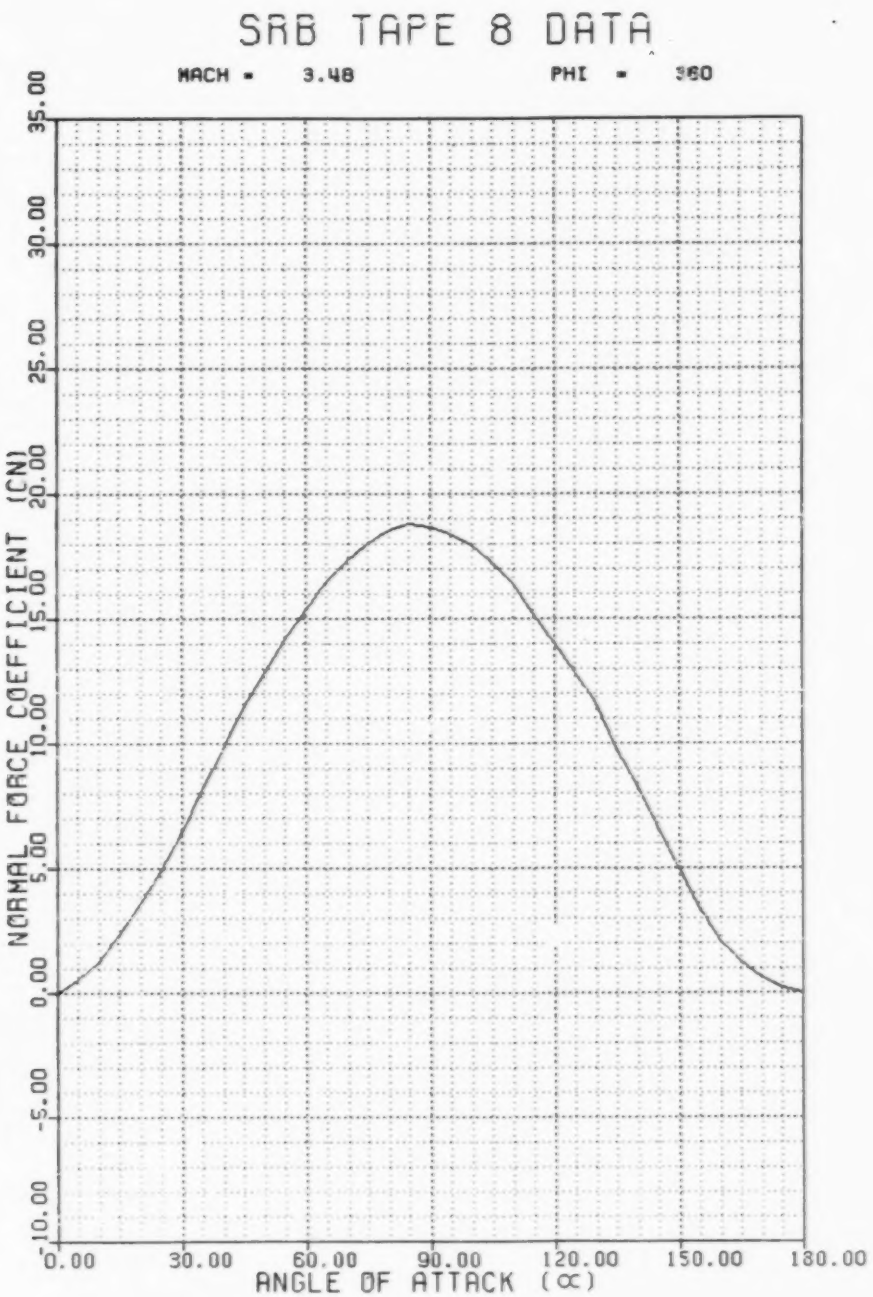
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
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-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

PITCHING MOMENT (CM)

Mach Number	Page
0.4	B-145
0.5	B-154
0.55	B-163
0.6	B-163
0.7	B-181
0.8	B-190
0.9	B-199
0.95	B-208
1.05	B-217
1.1	B-226
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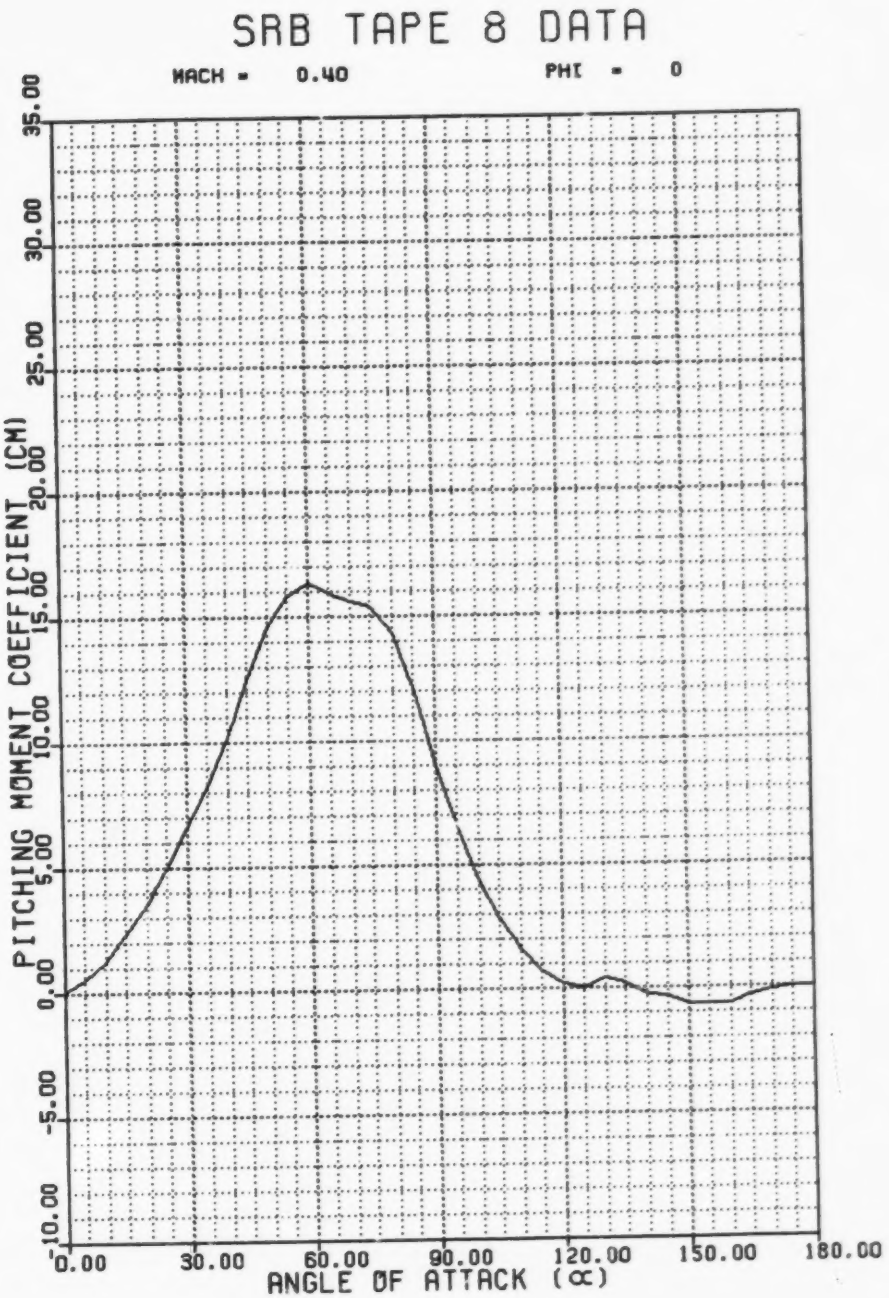
1.4	B-244
1.96	B-253
2.5	B-262
3.0	B-271
3.48	B-280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180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 0.40
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120.00
150.00
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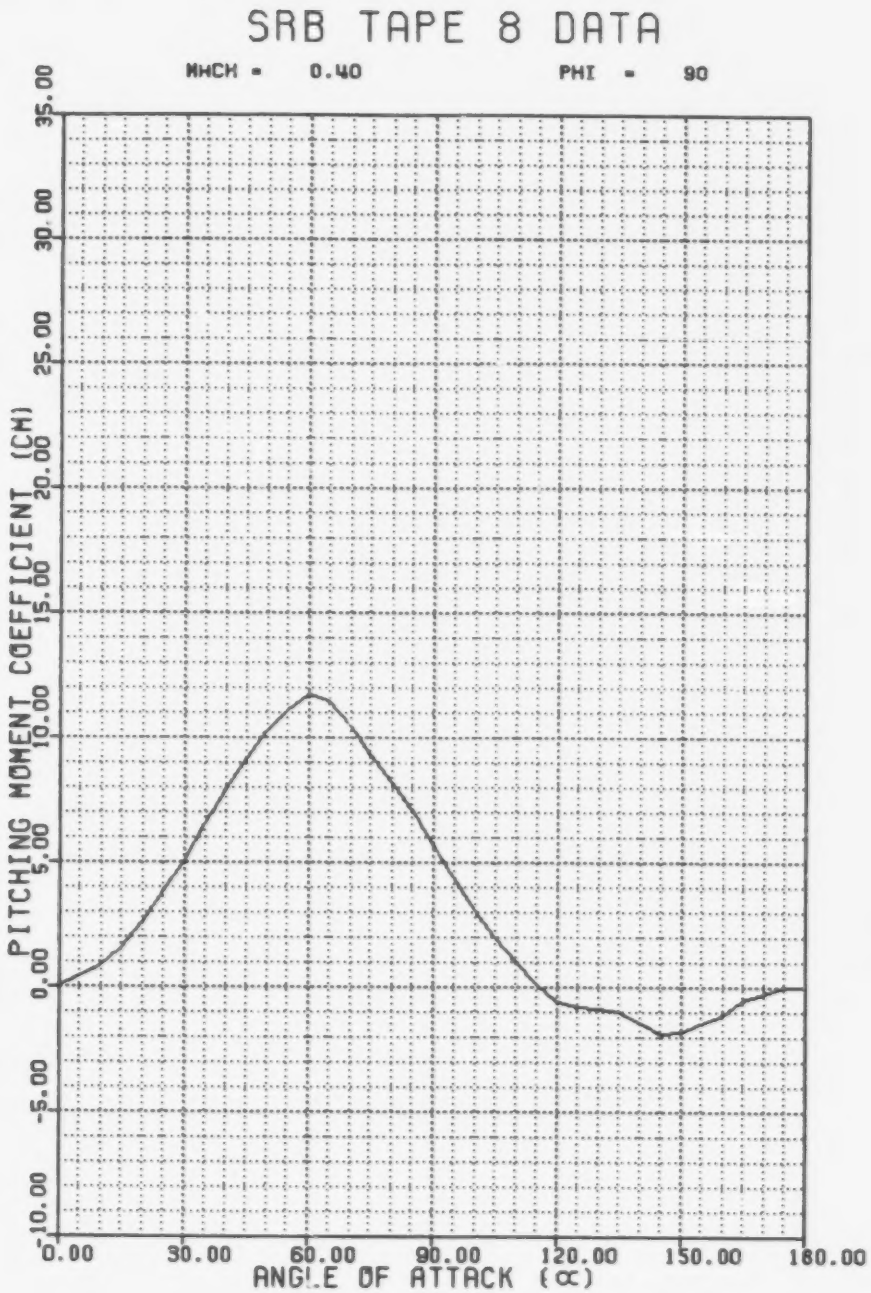
ANGLE OF ATTACK (α)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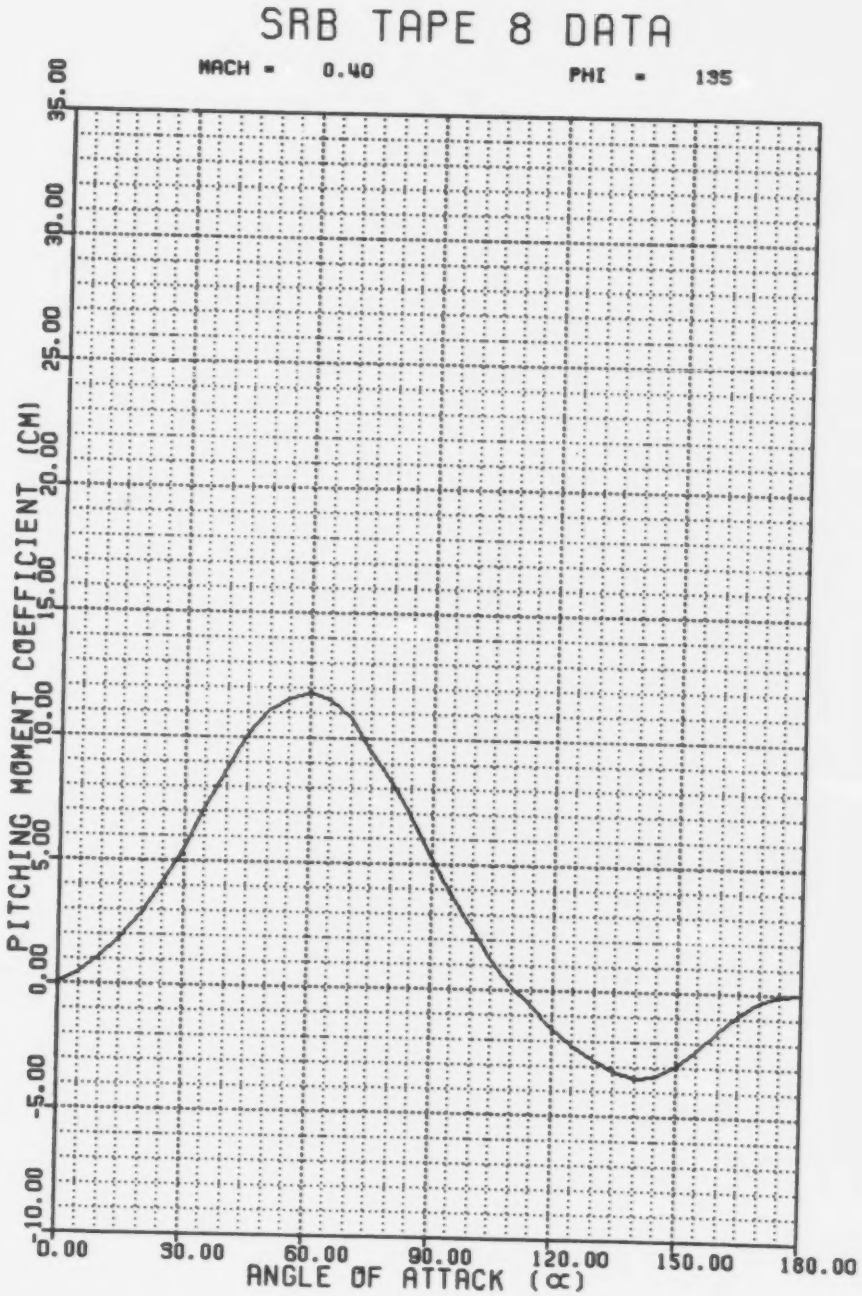
ANGLE OF ATTACK (α)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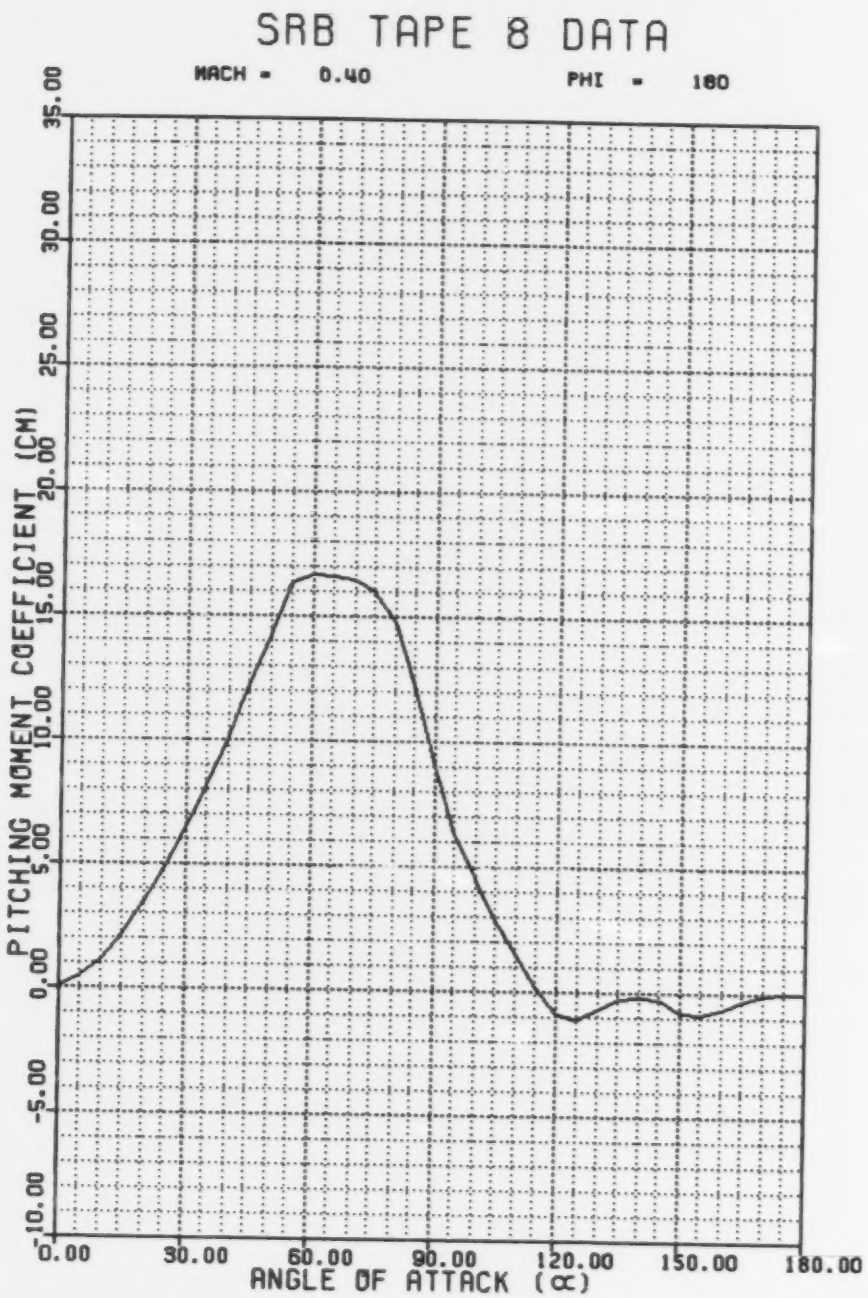
ANGLE OF ATTACK (α)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120.00
150.00
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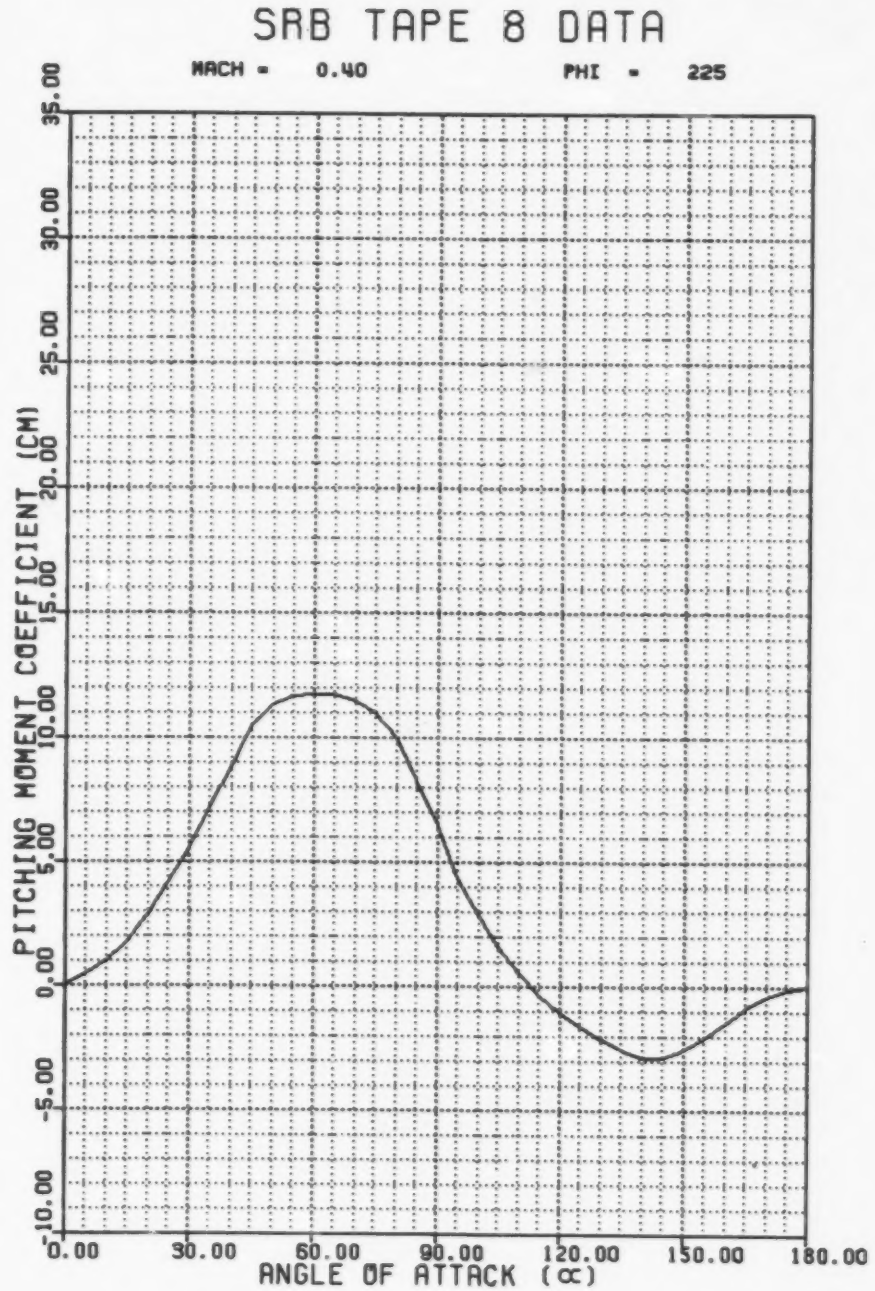
ANGLE OF ATTACK (α)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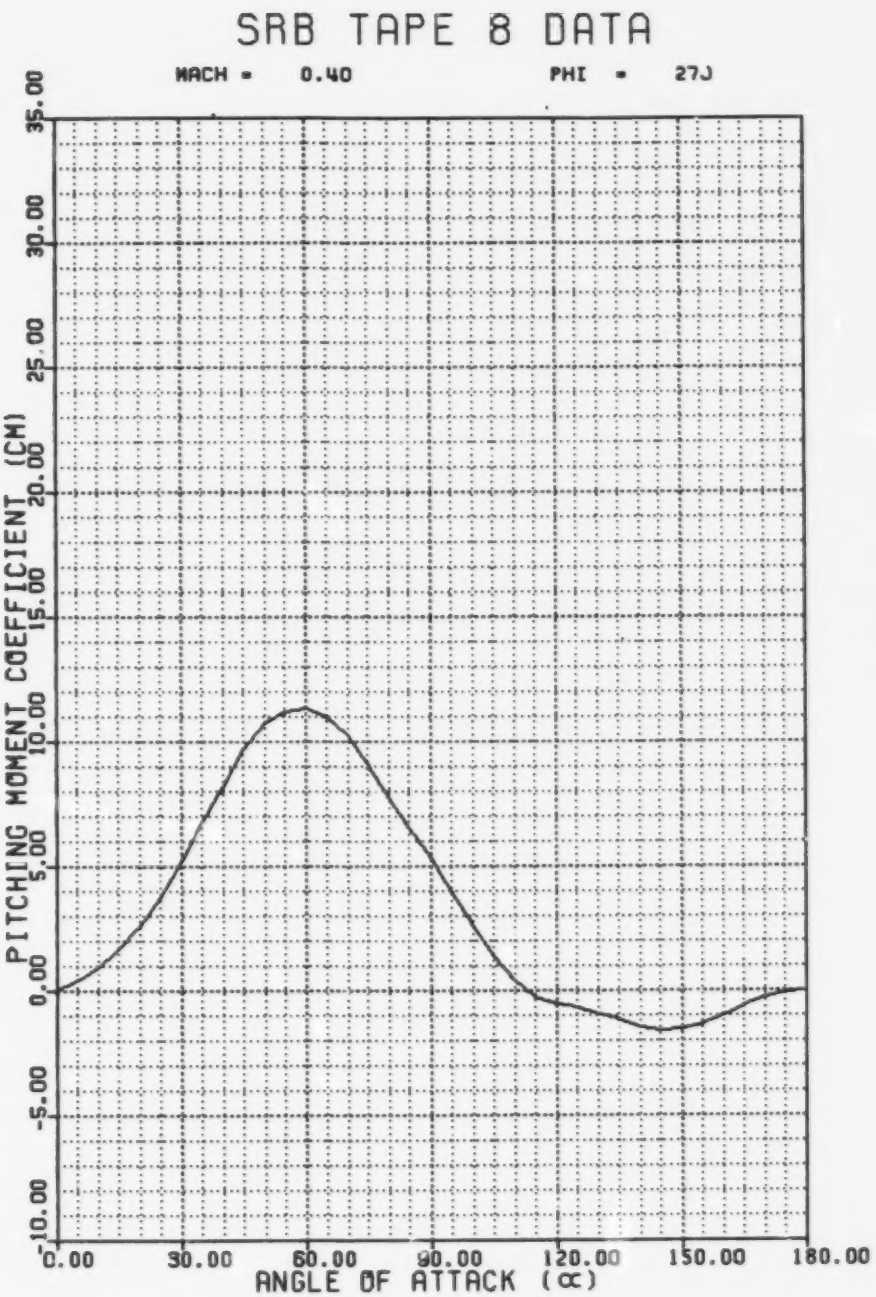
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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120.00
150.00
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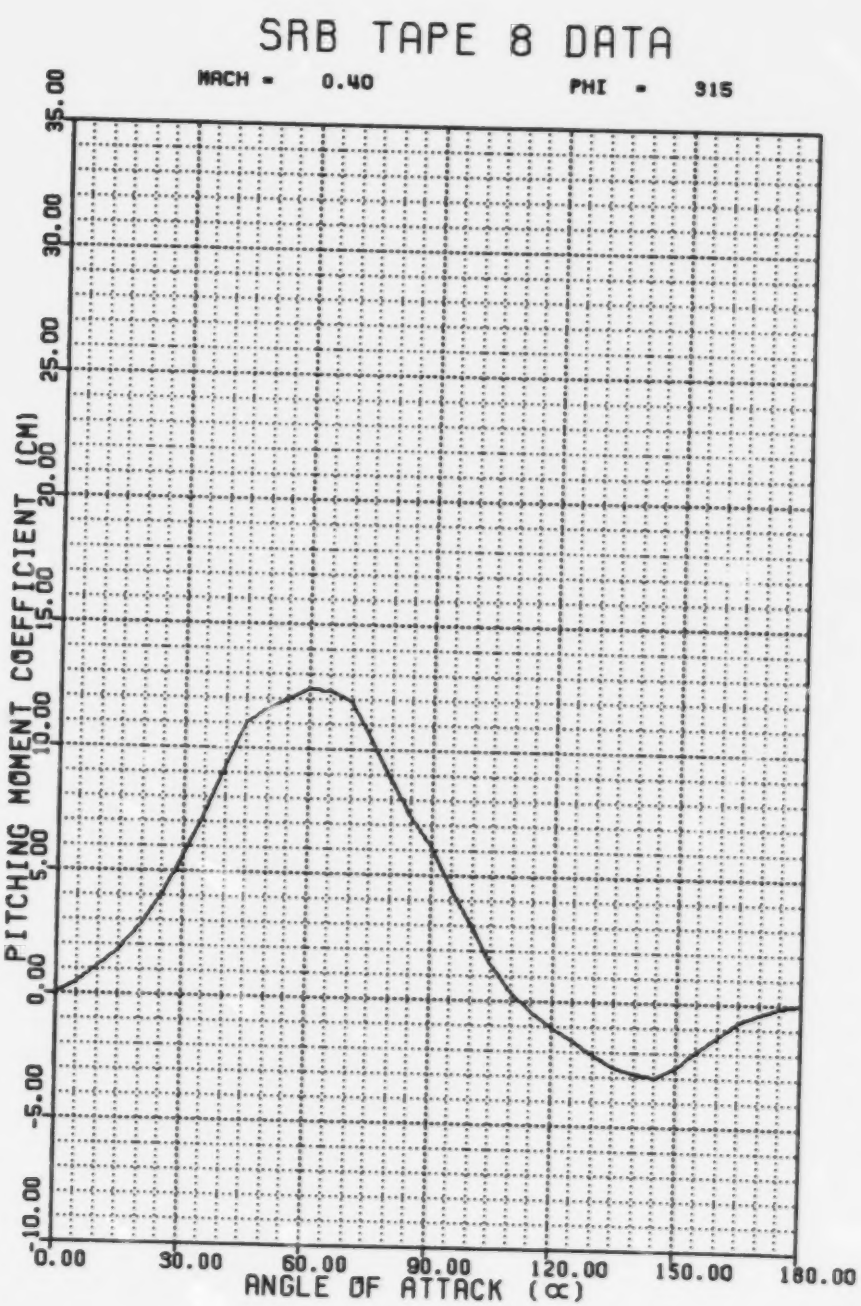
ANGLE OF ATTACK (α)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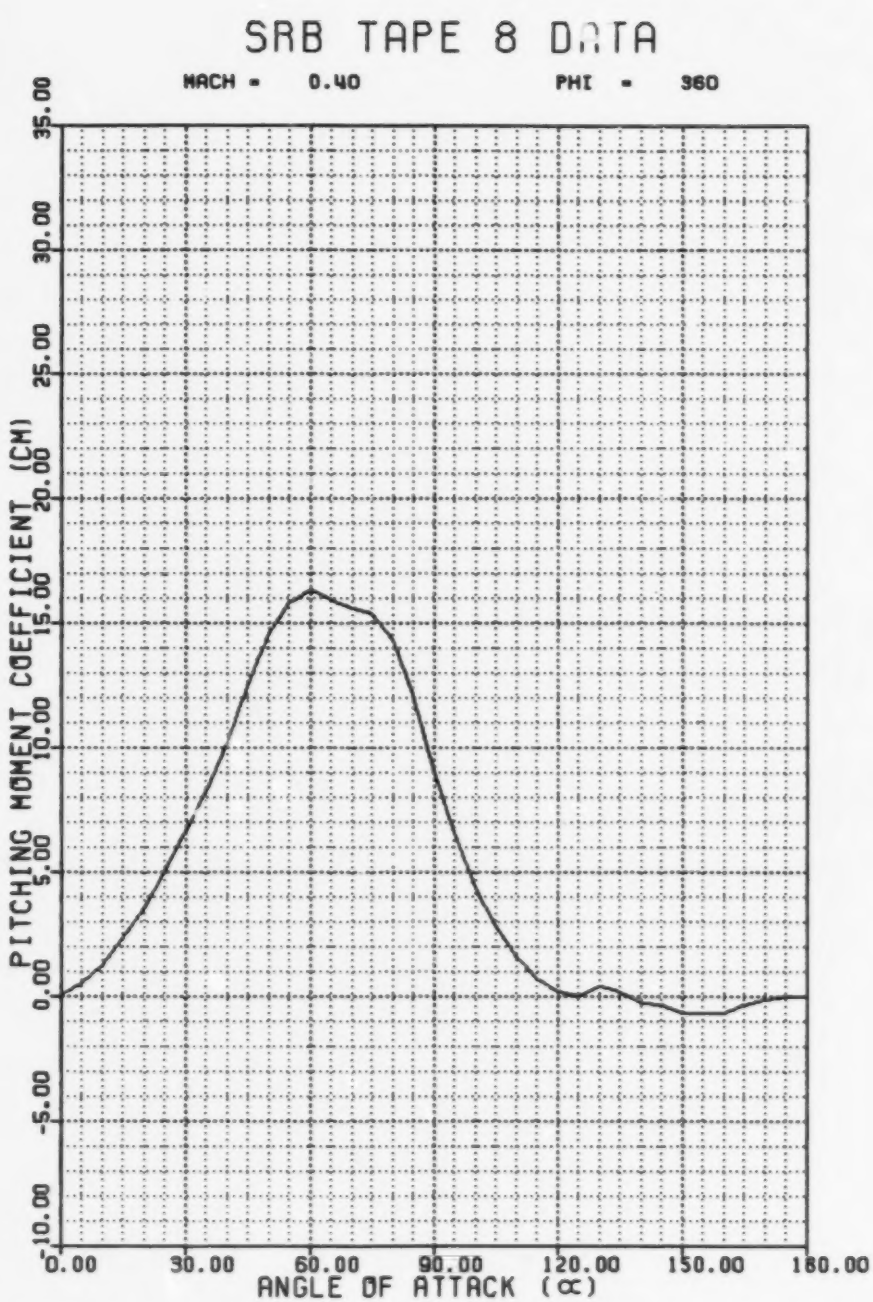
120.00
150.00
180.00
ANGLE OF ATTACK (α)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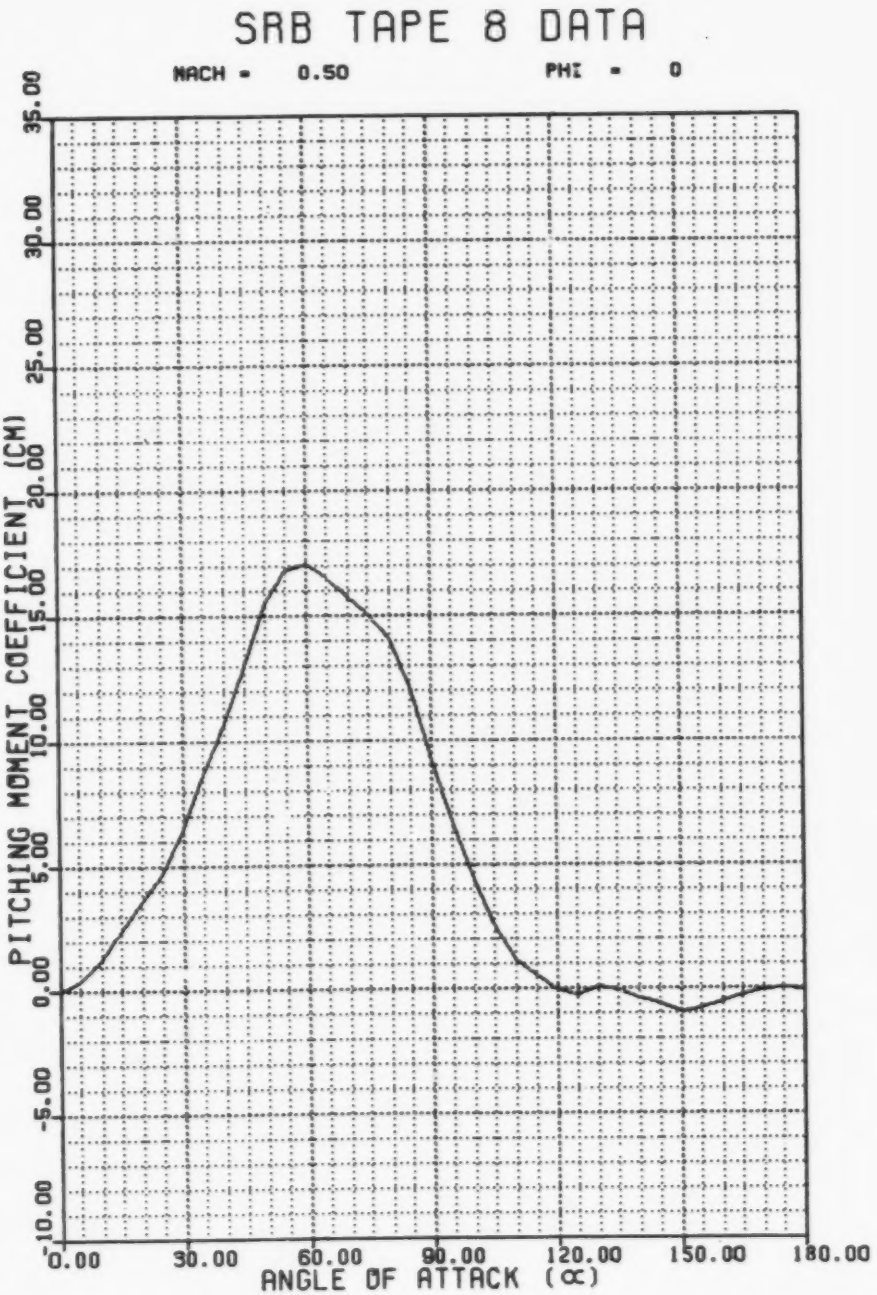
ANGLE OF ATTACK (α)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120.00
150.00
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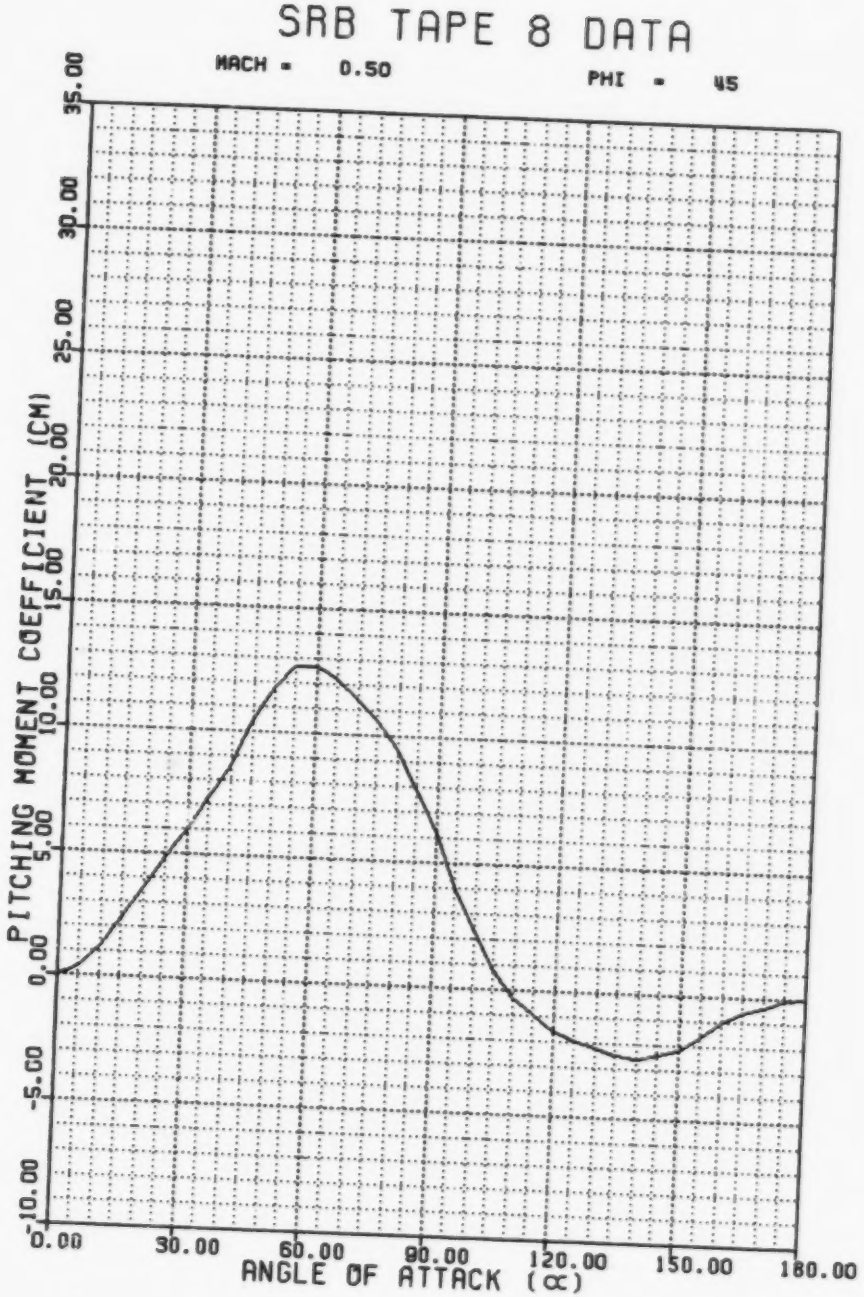
ANGLE OF ATTACK (α)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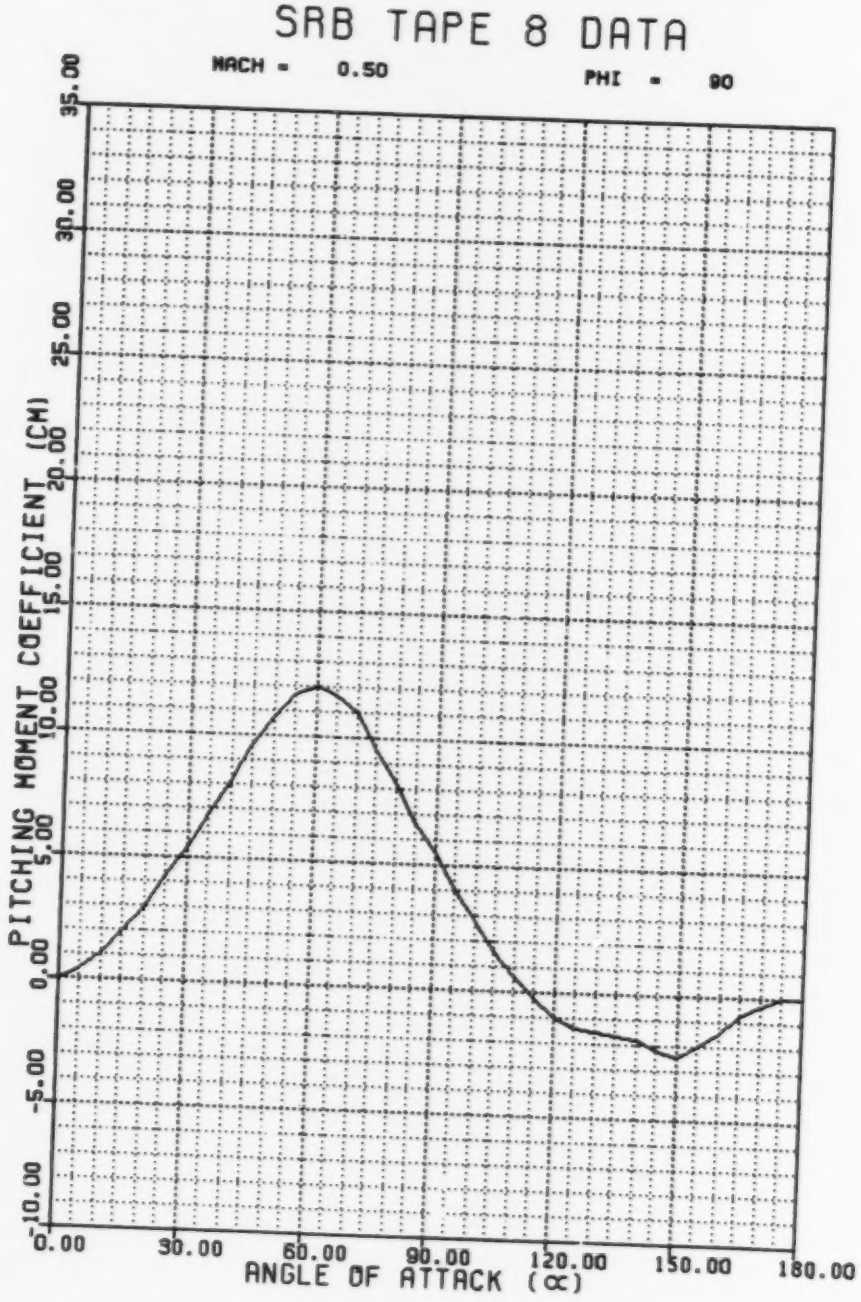
ANGLE OF ATTACK (α)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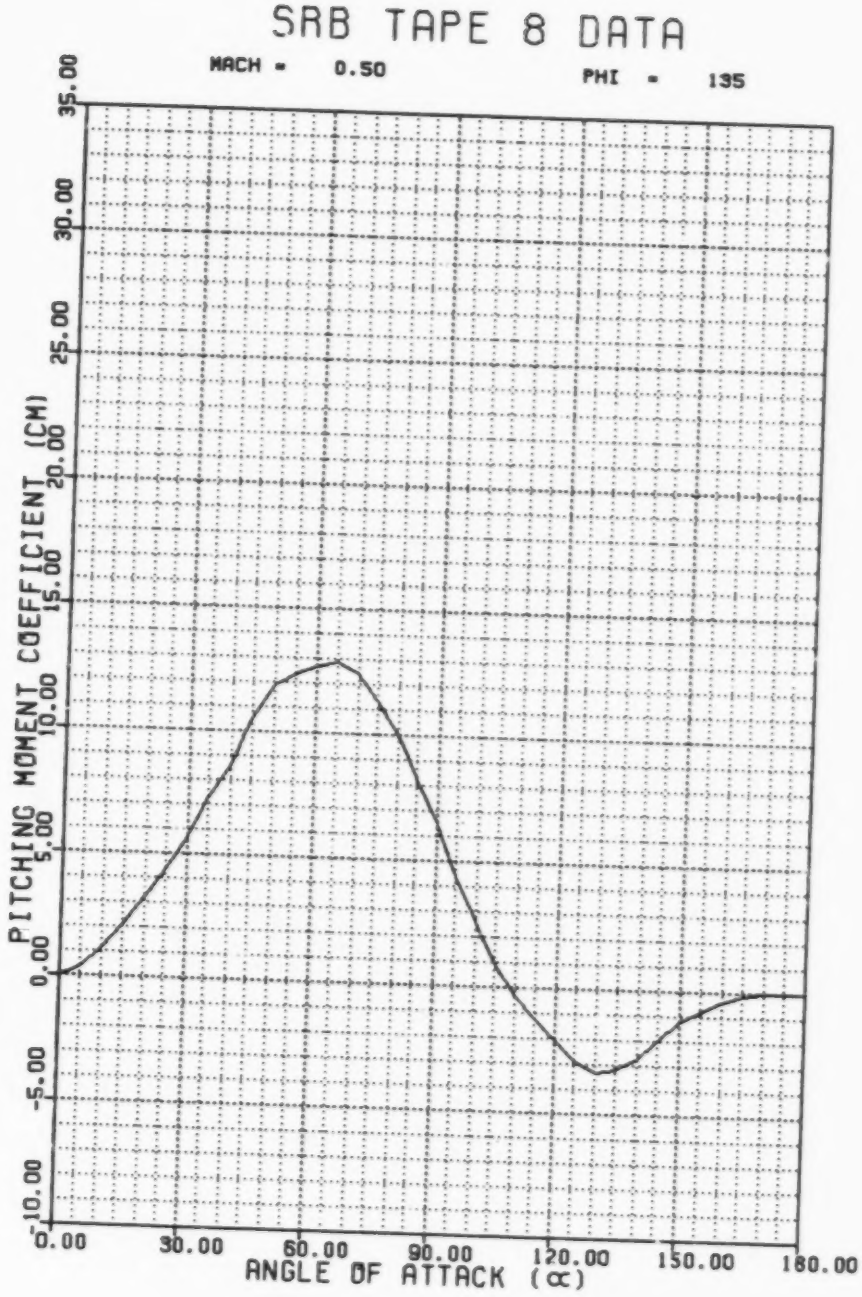
ANGLE OF ATTACK (α)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150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 0.50
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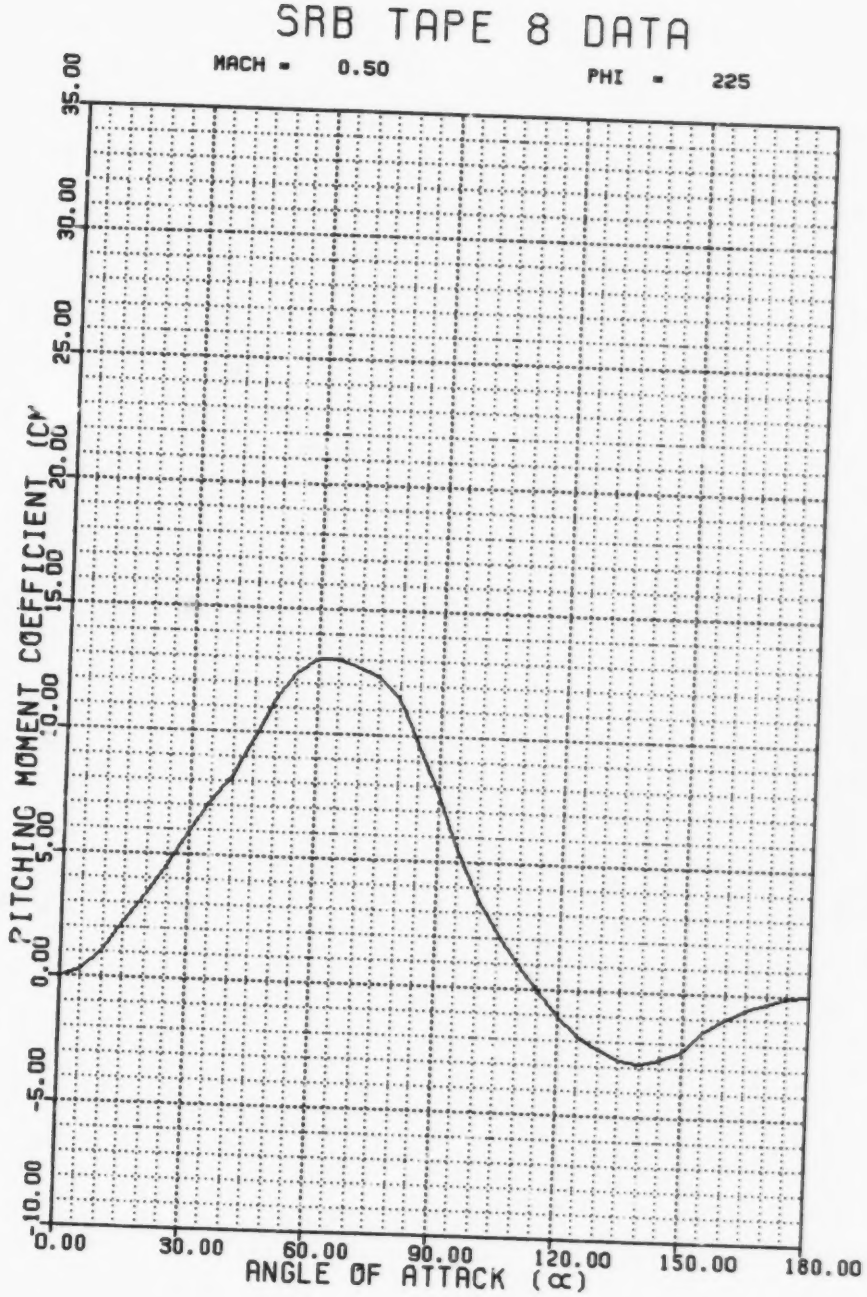
ANGLE OF ATTACK (α)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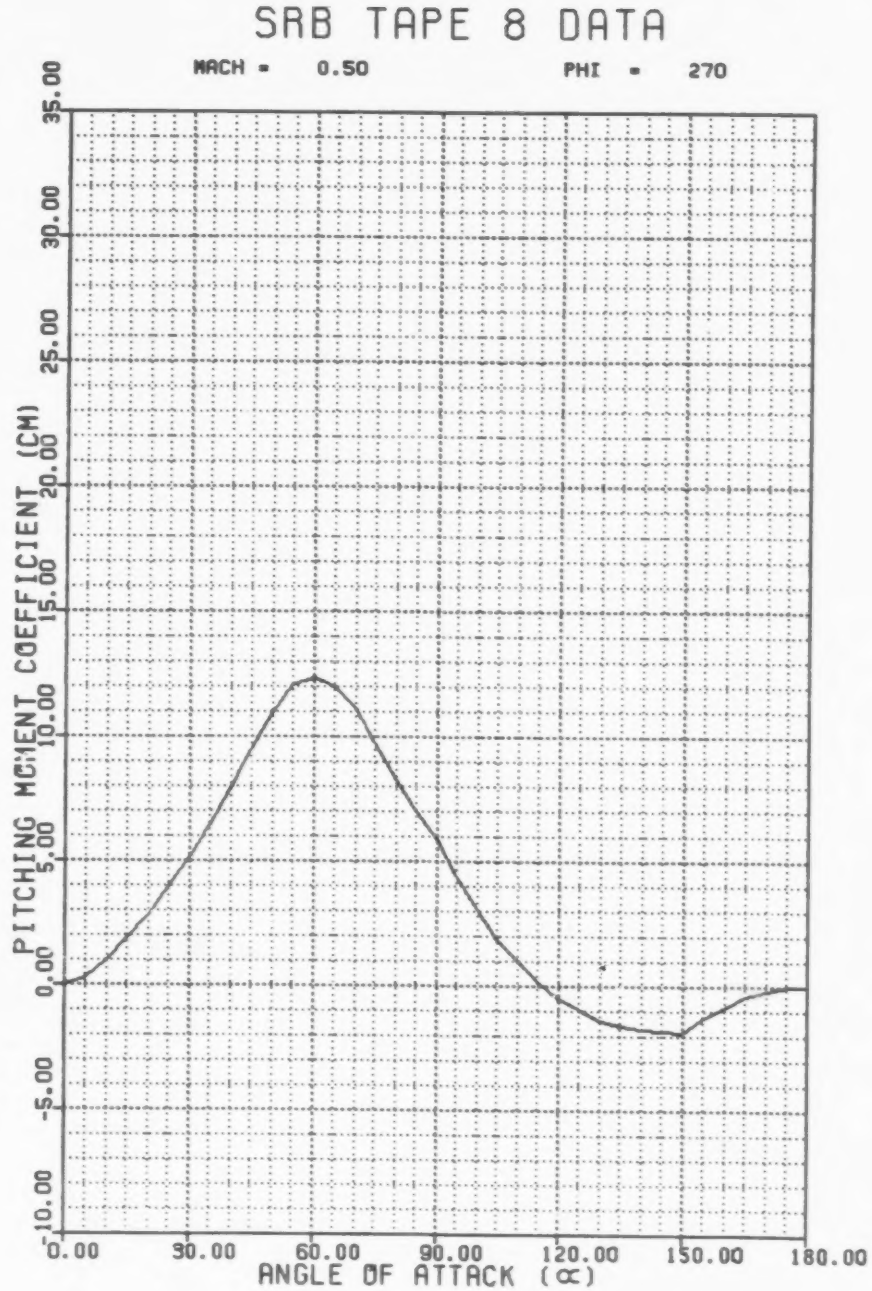
ANGLE OF ATTACK (α)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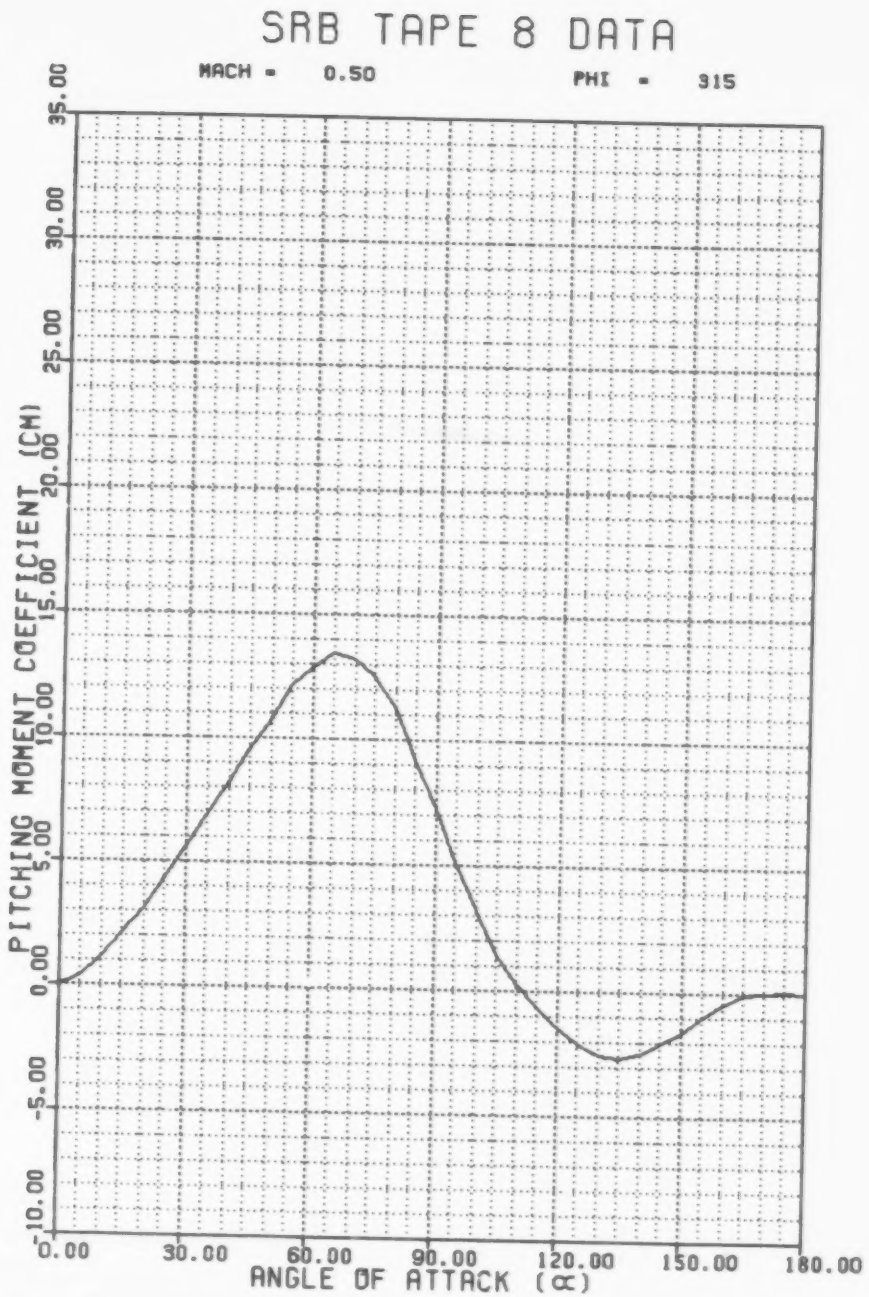
ANGLE OF ATTACK (α)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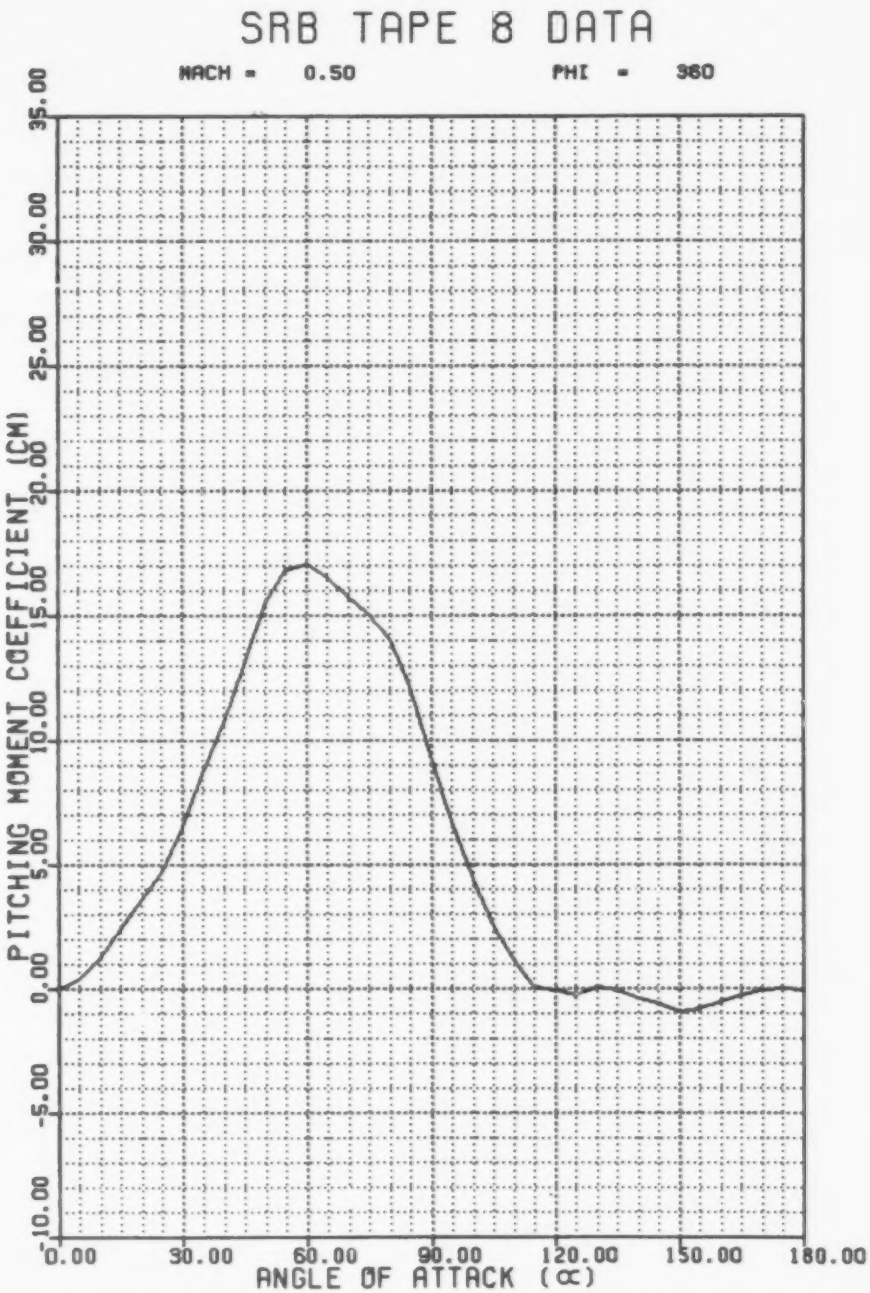
180.00
ANGLE OF ATTACK (α)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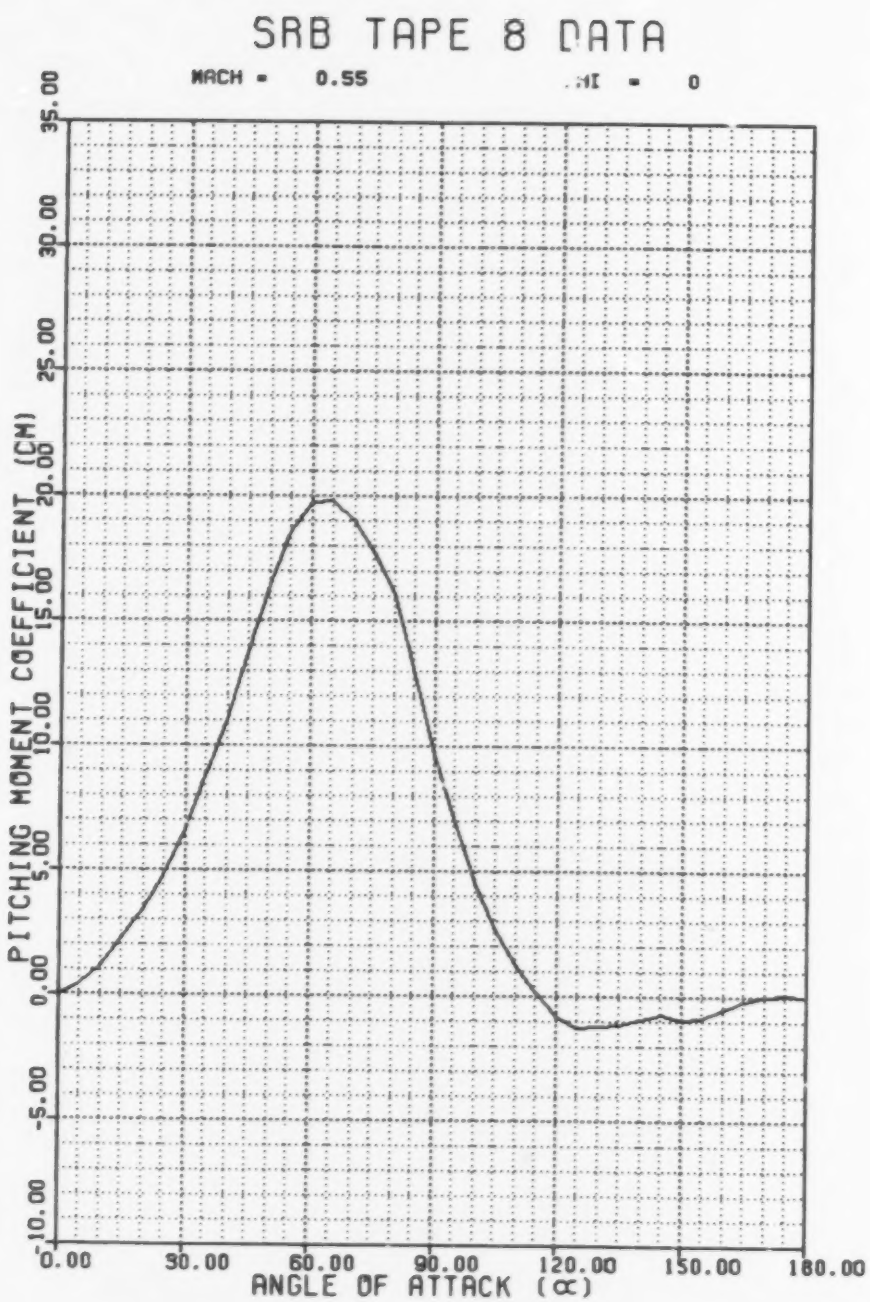
ANGLE OF ATTACK (α)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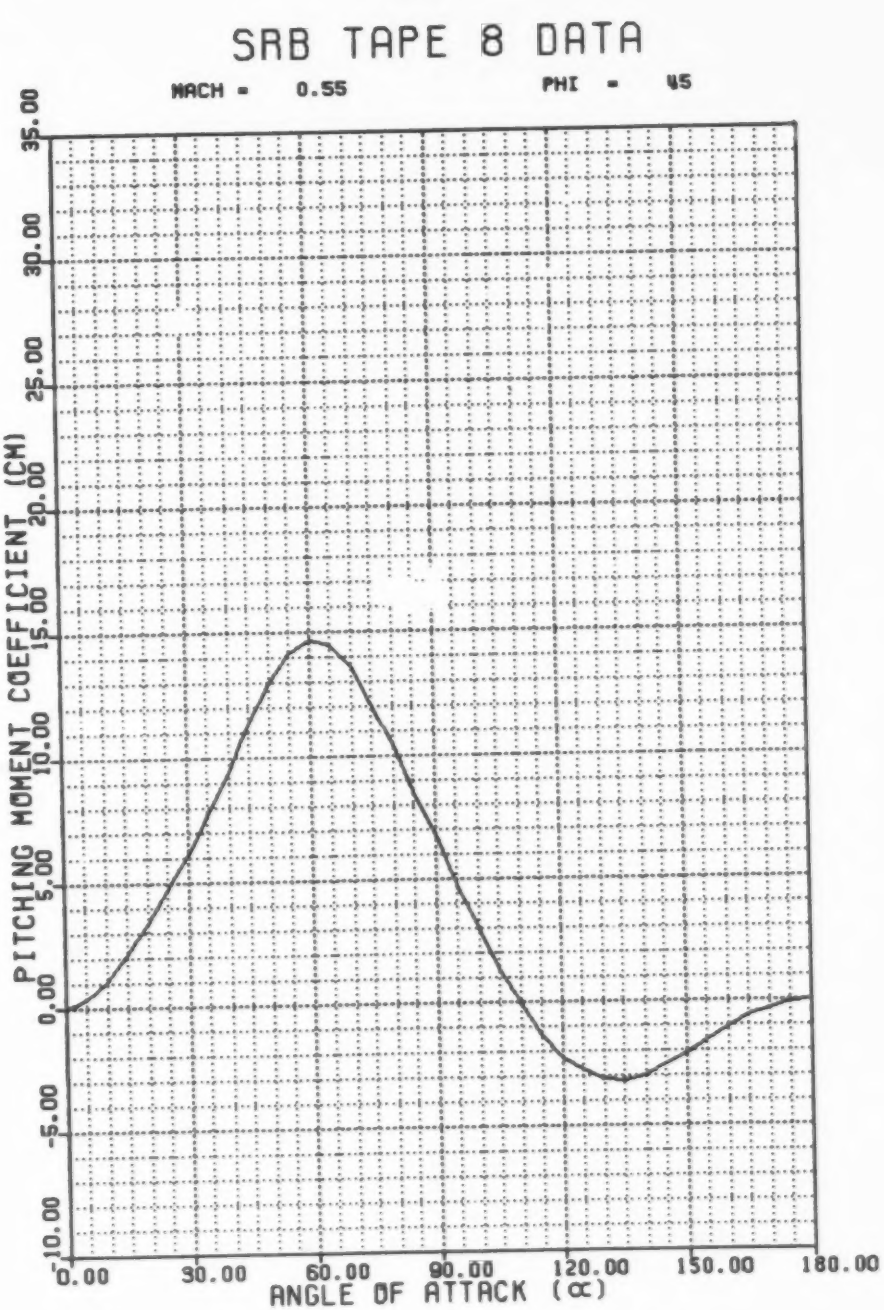
180.00
ANGLE OF ATTACK (α)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ANGLE OF ATTACK (α)

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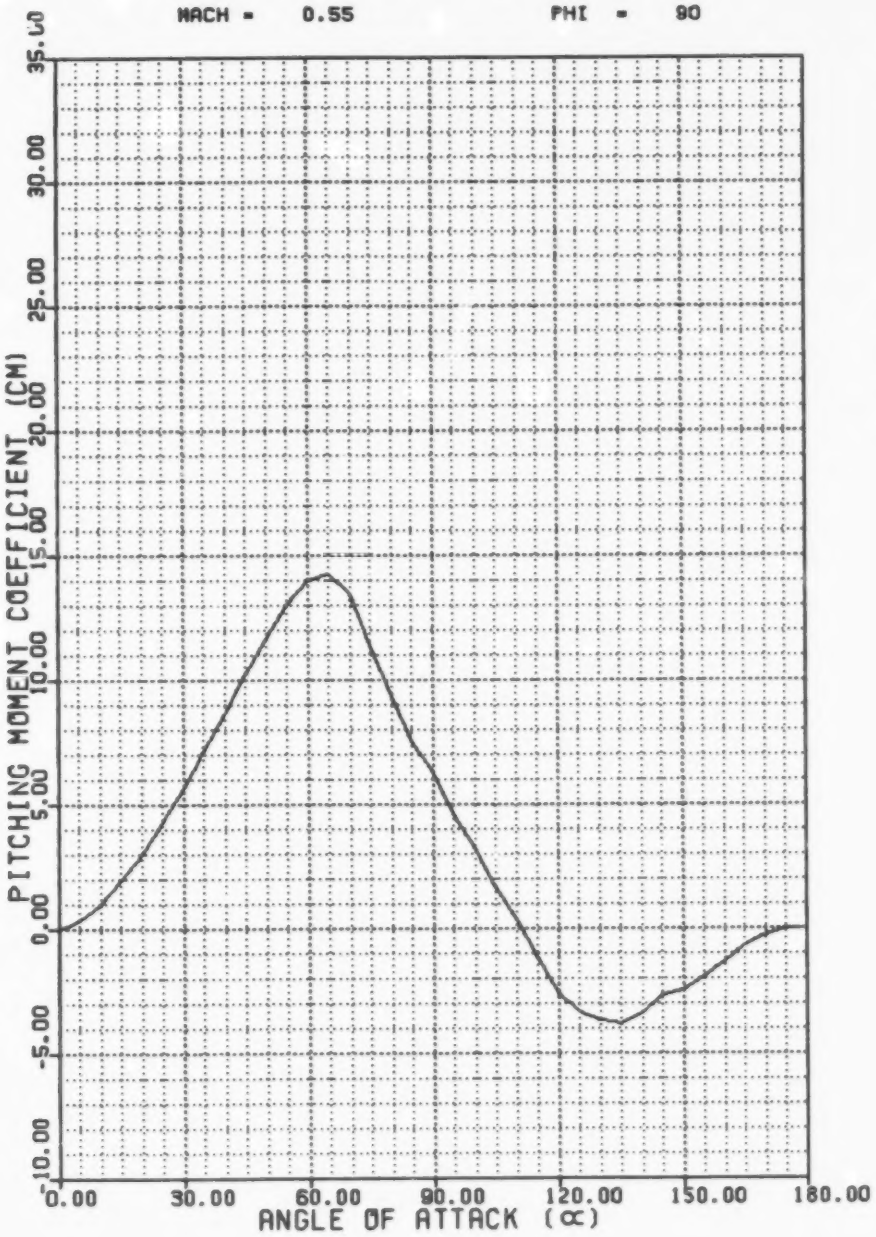

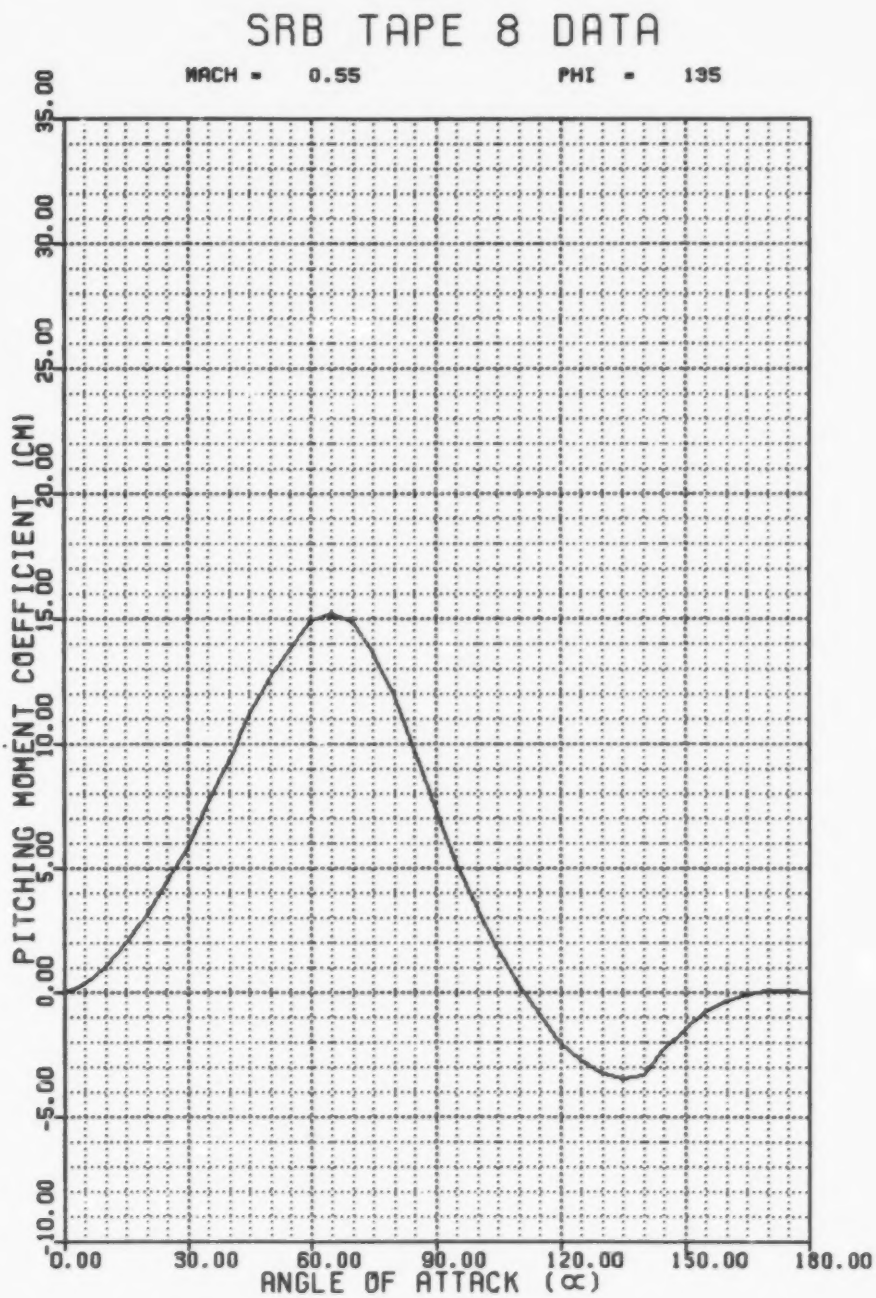
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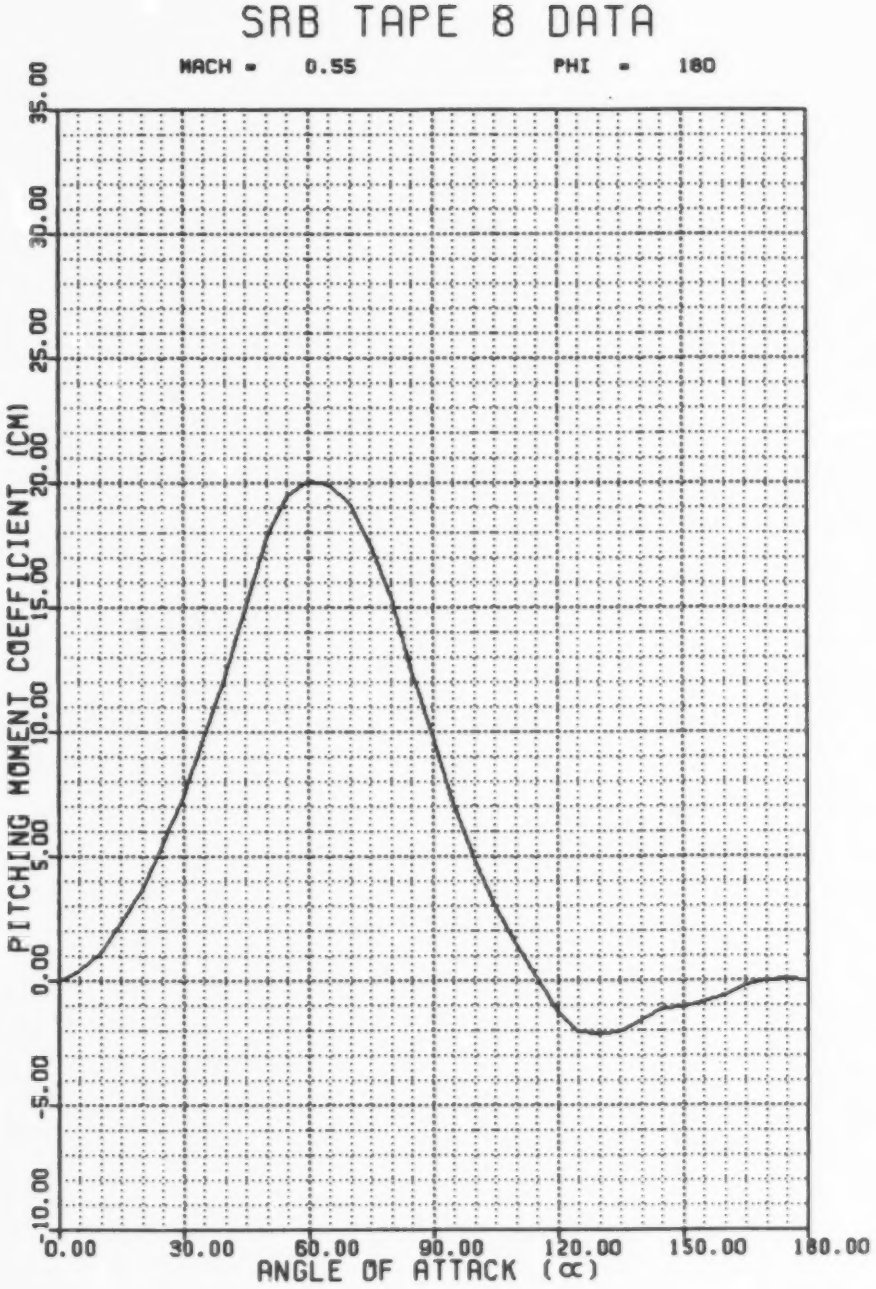
ANGLE OF ATTACK (α)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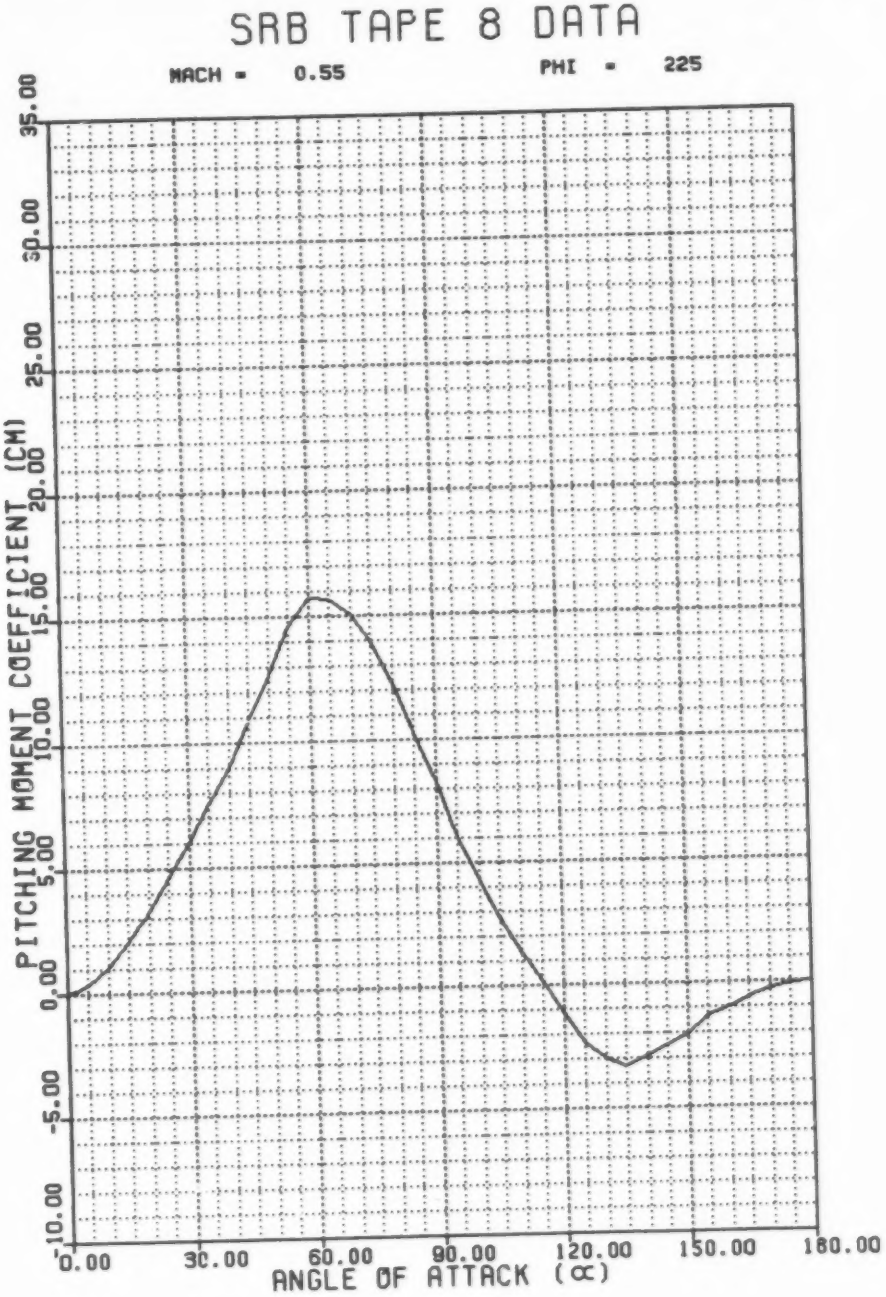
ANGLE OF ATTACK (α)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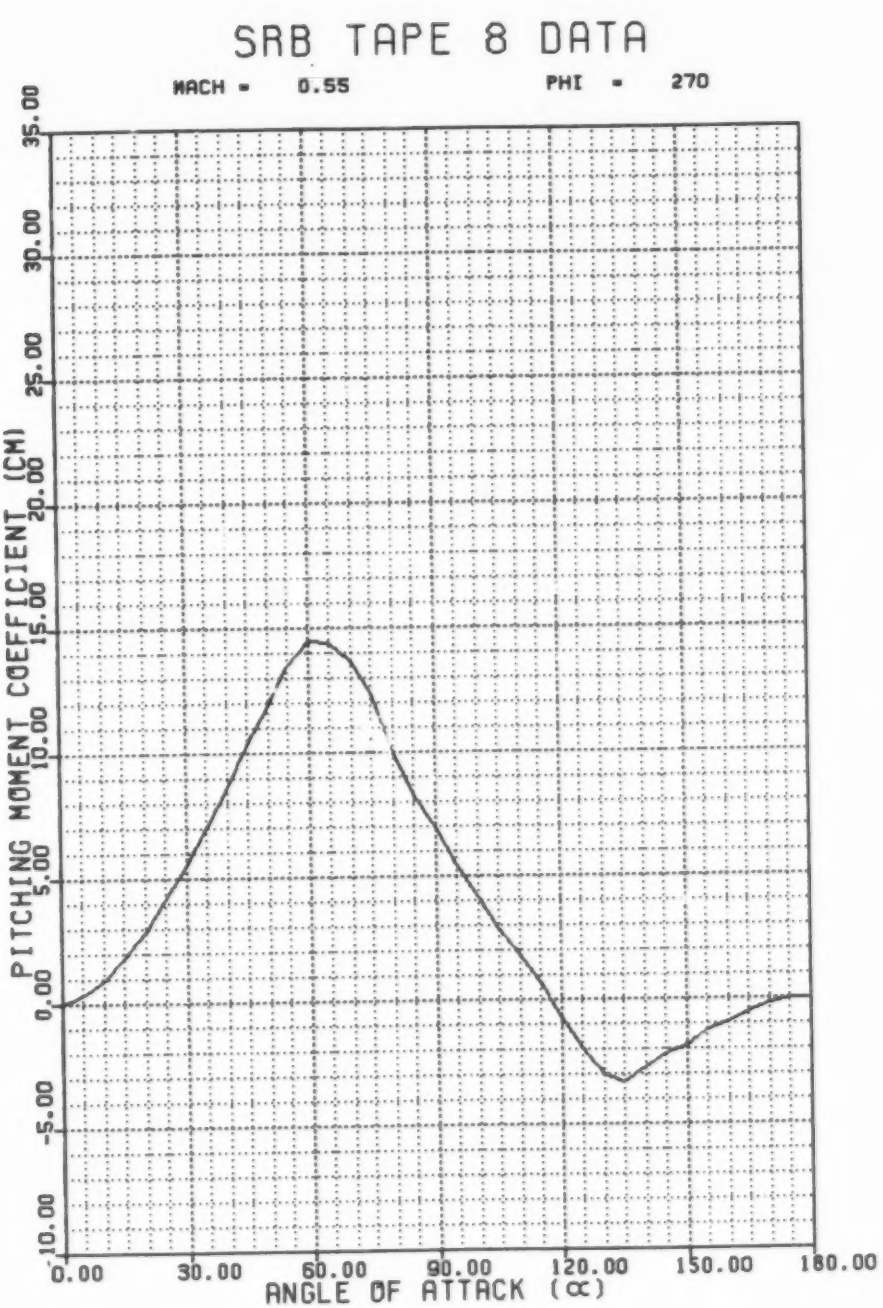
ANGLE OF ATTACK (α)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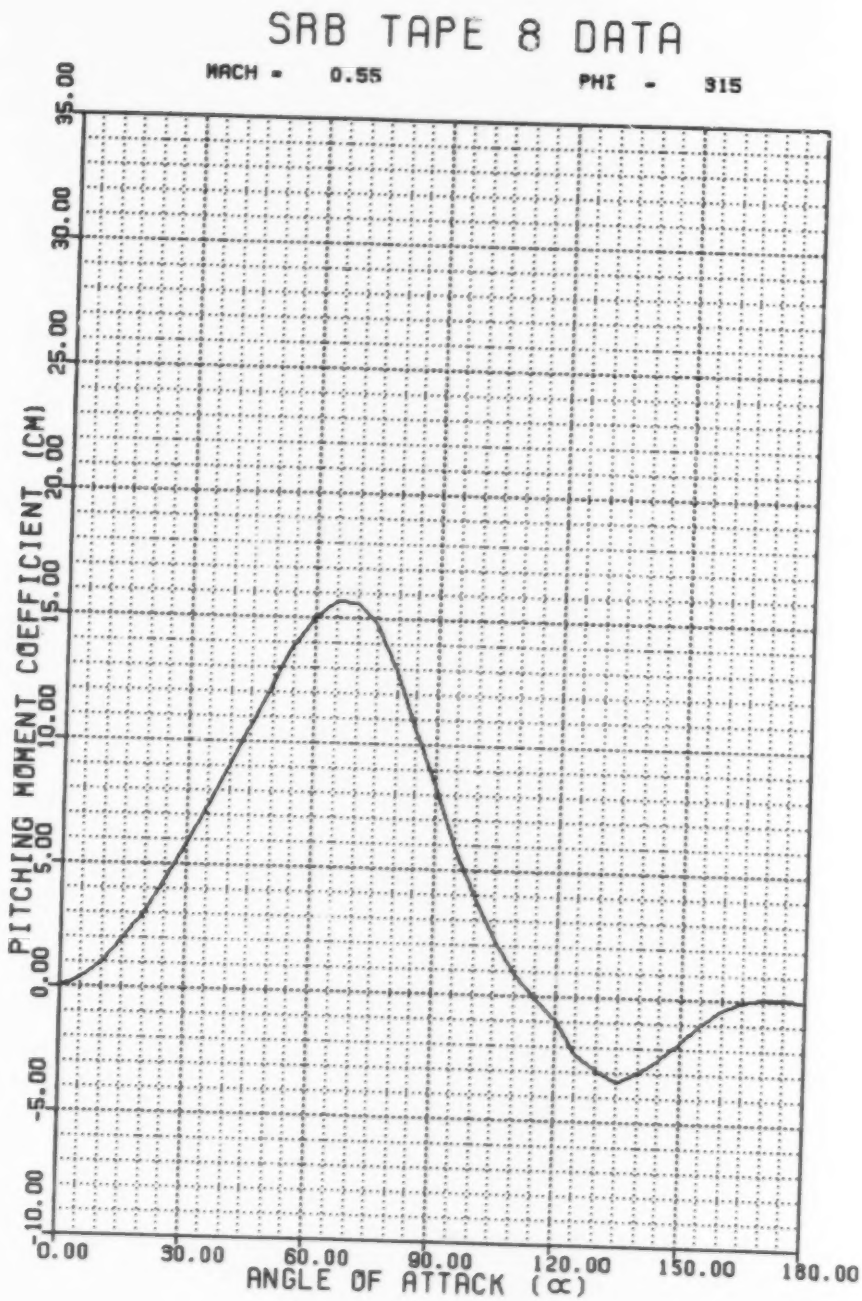
150.00
180.00
ANGLE OF ATTACK (α)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PHI - 315
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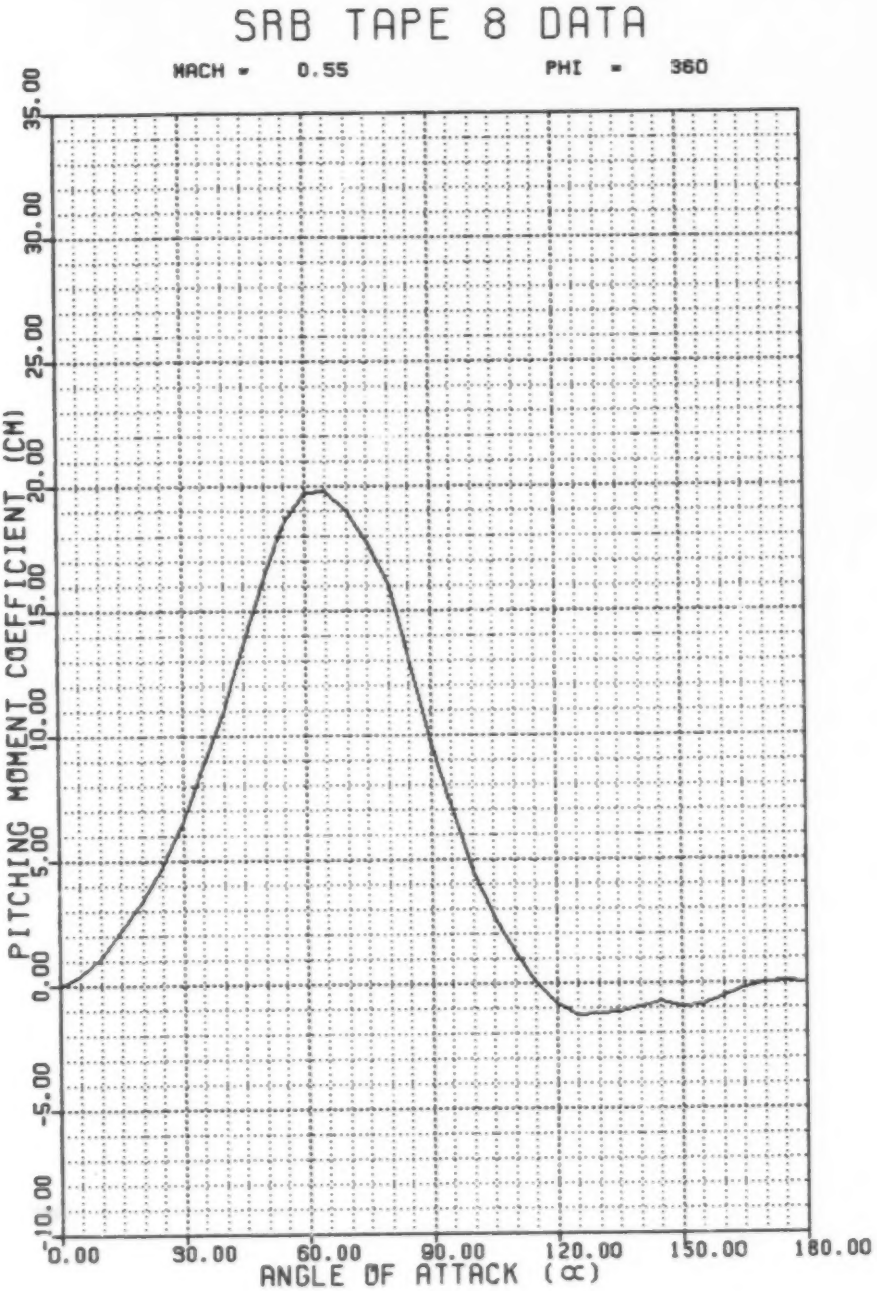
180.00
ANGLE OF ATTACK (α)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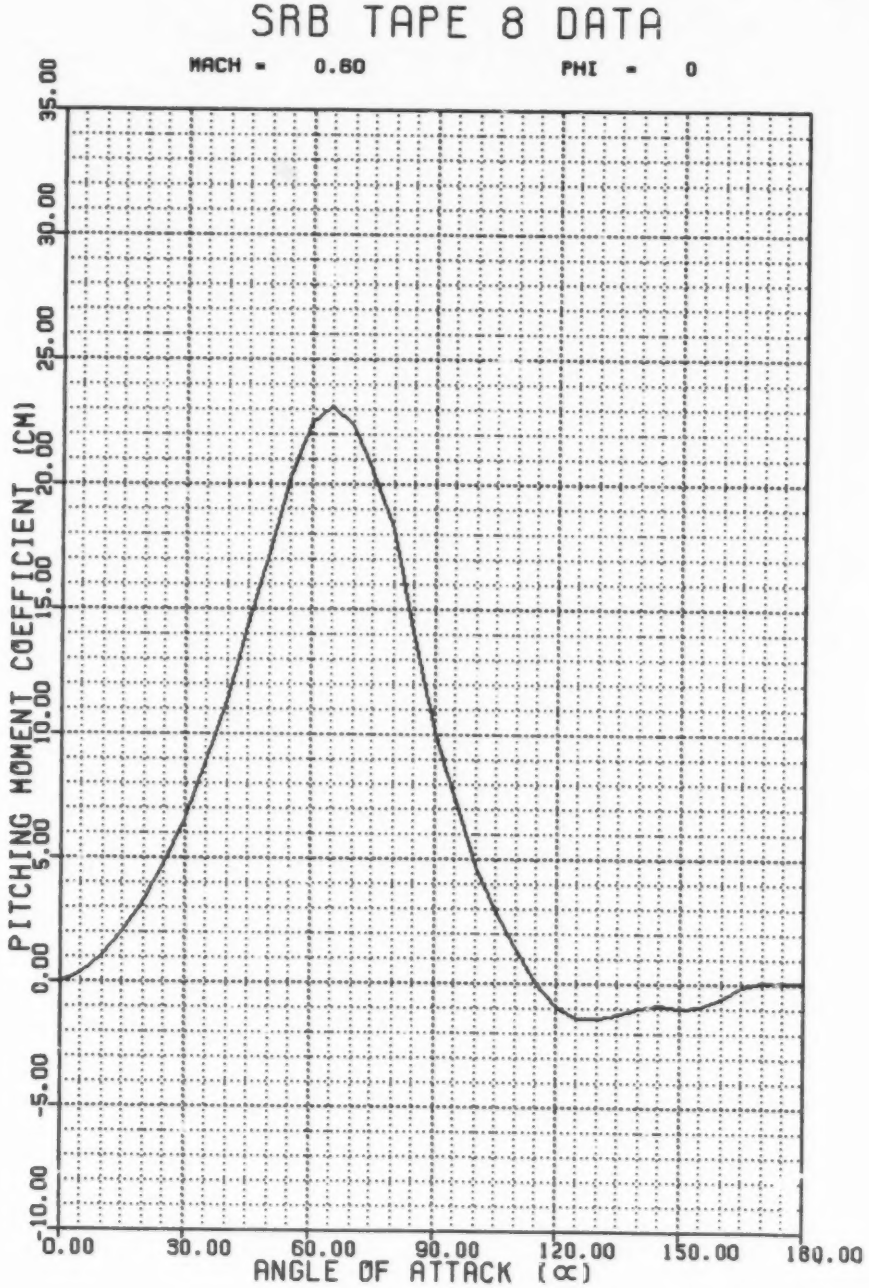
180.00
ANGLE OF ATTACK (α)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-10.00
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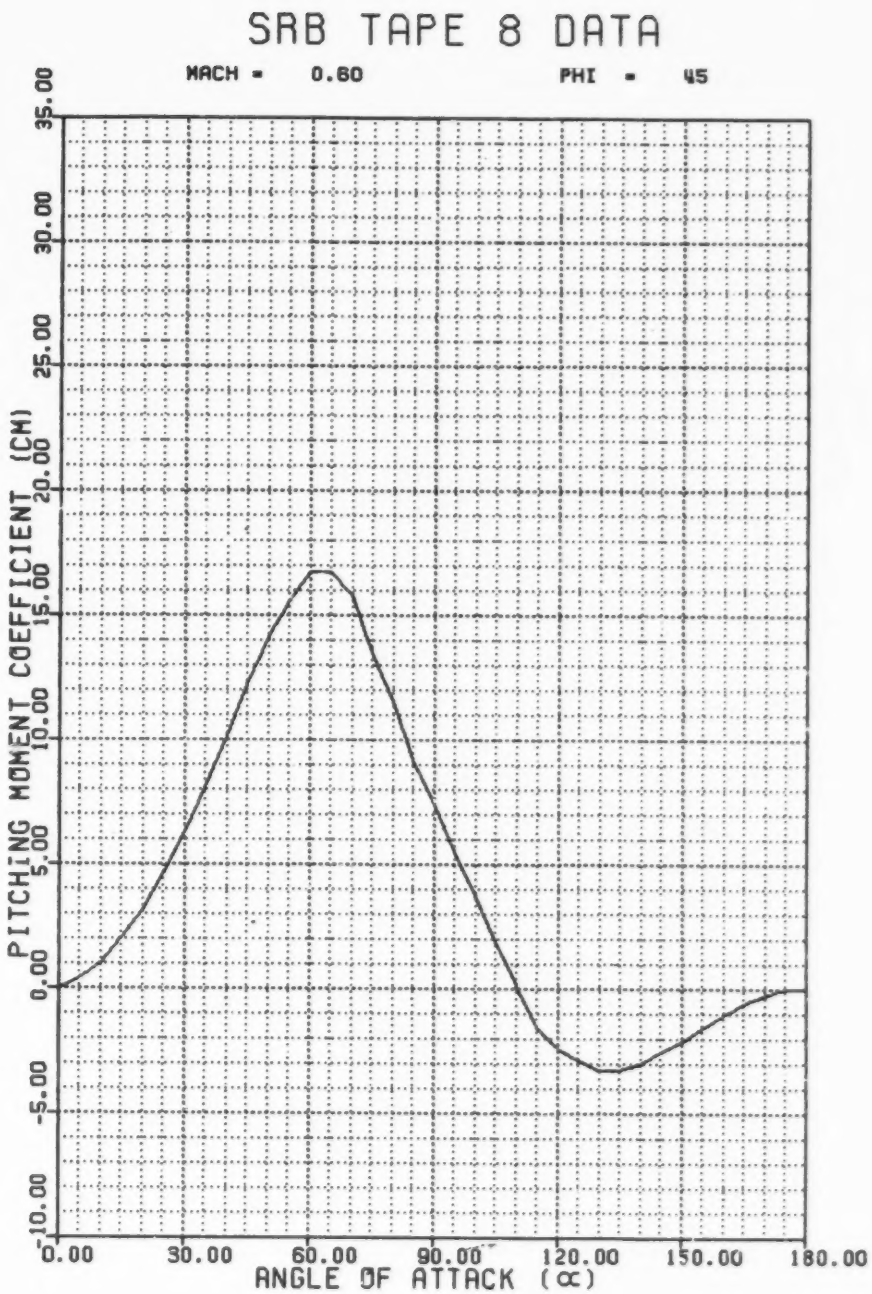
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
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120.00
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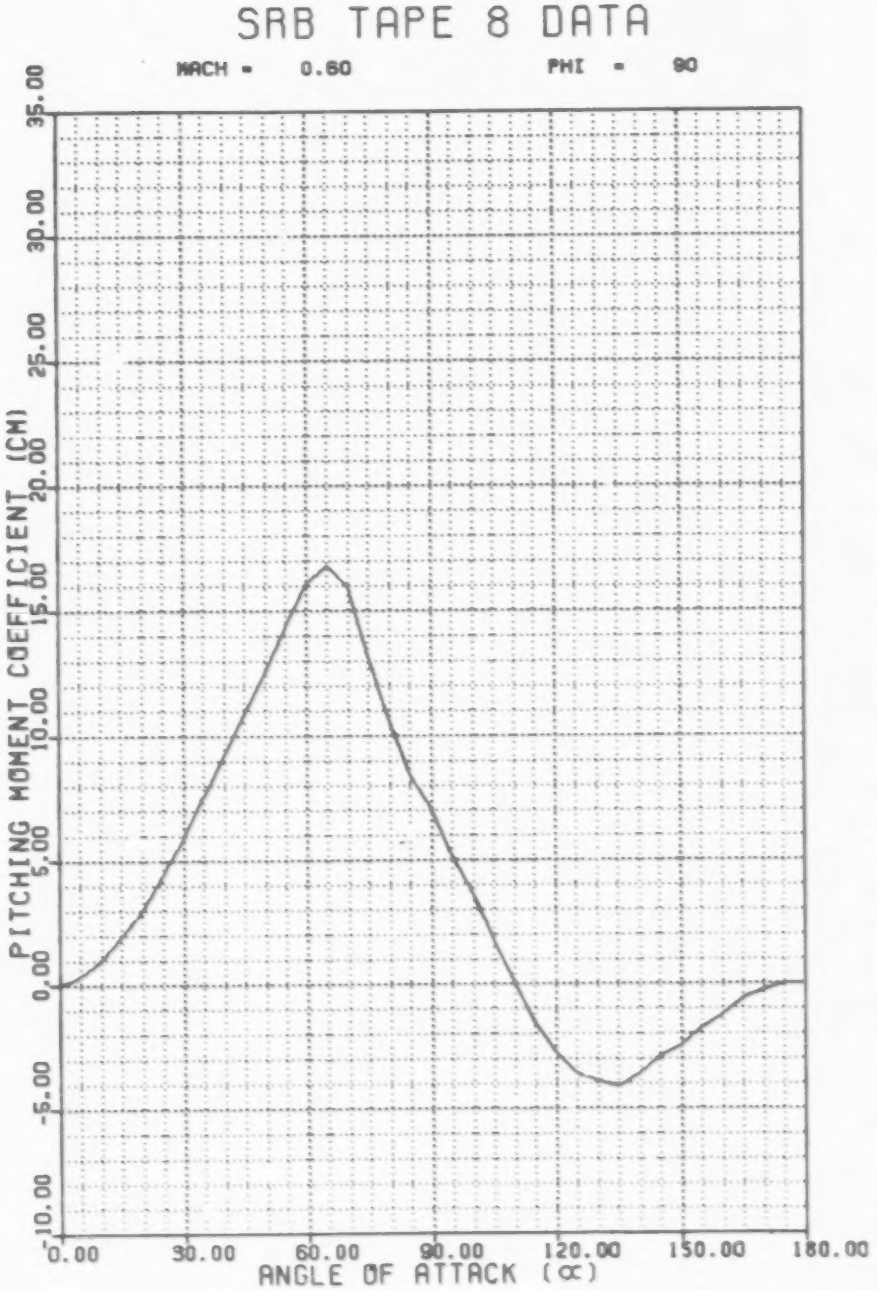
ANGLE OF ATTACK (α)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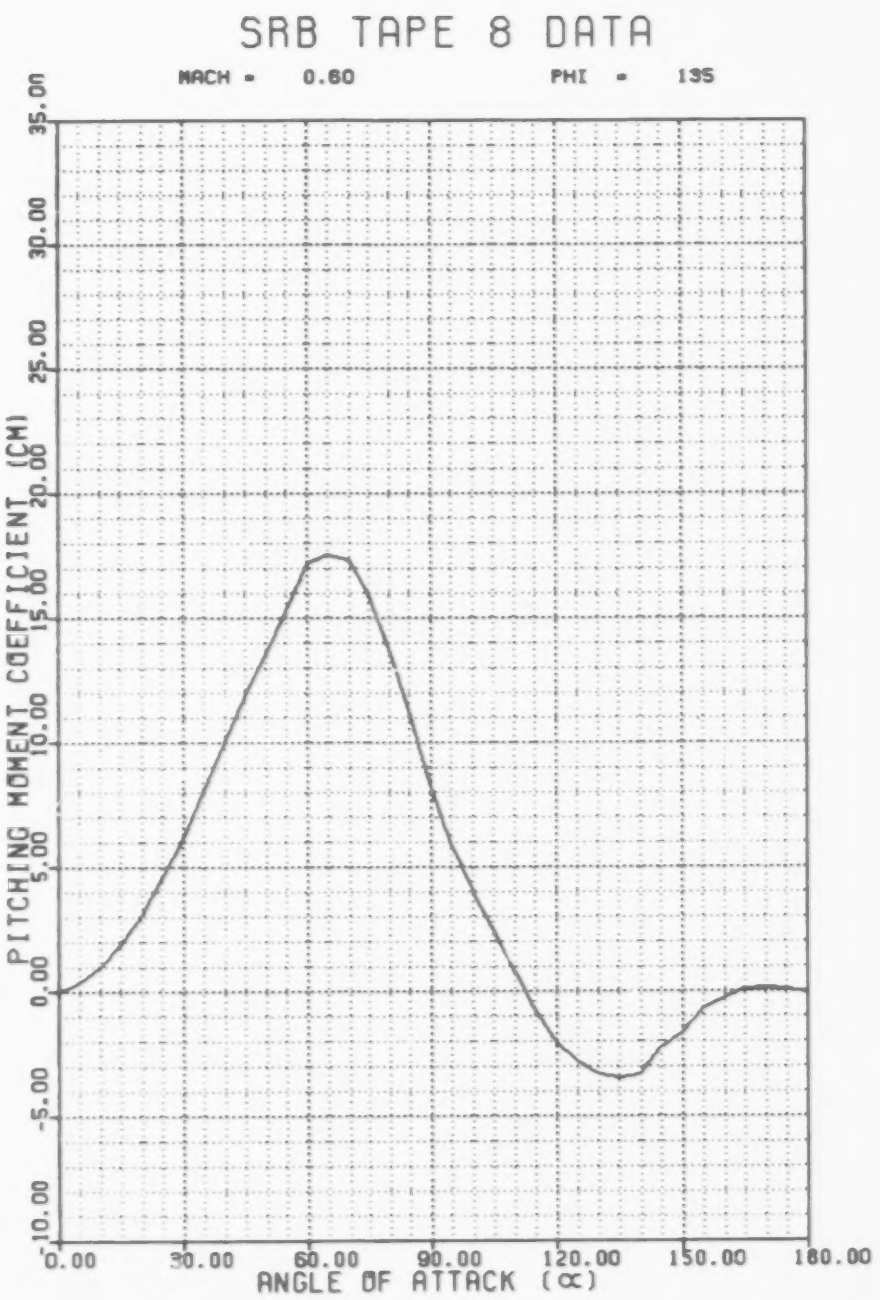
ANGLE OF ATTACK (α)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60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 0.80
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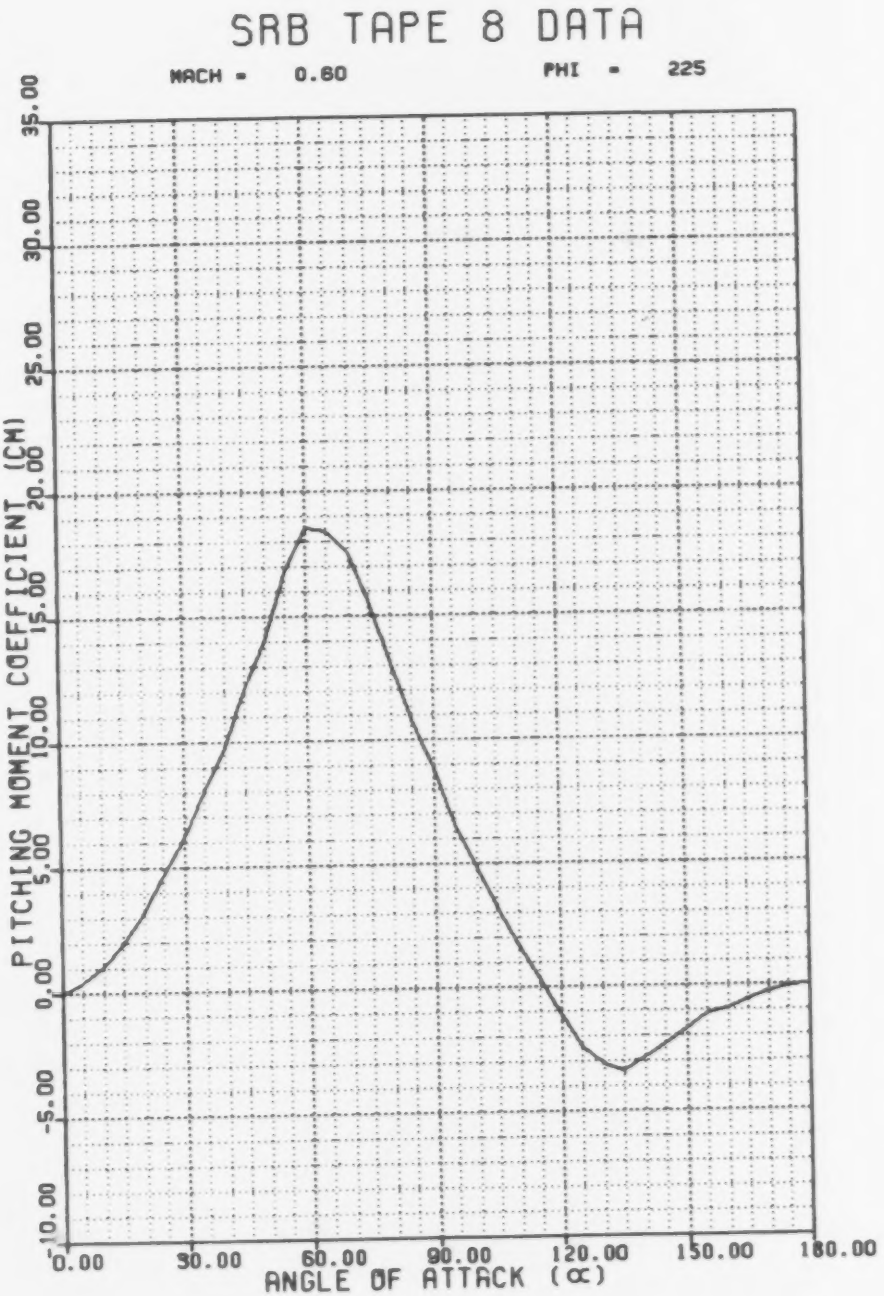
ANGLE OF ATTACK (α)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60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 0.80
PHI = 270
PITCHING MOMENT COEFFICIENT (CM)
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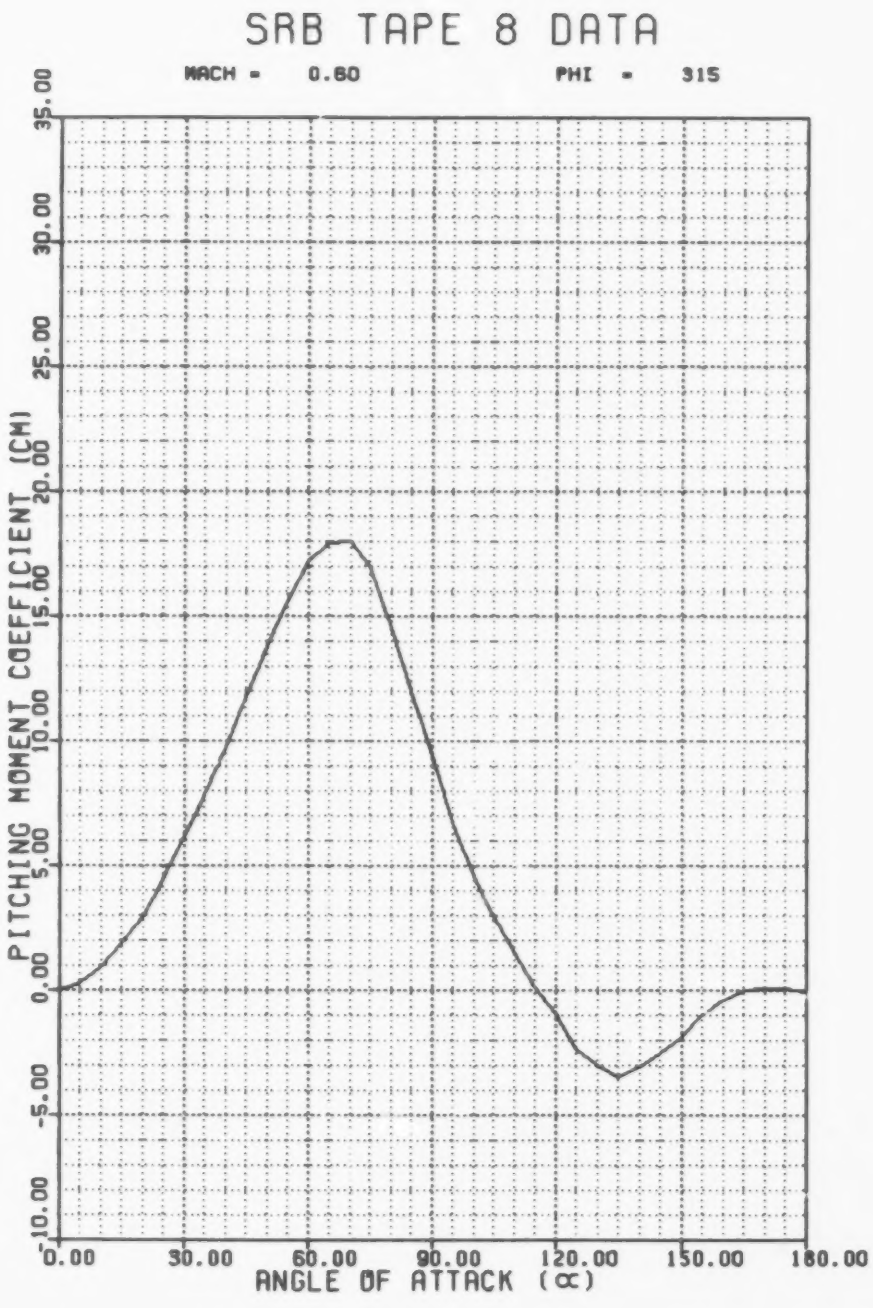
ANGLE OF ATTACK (α)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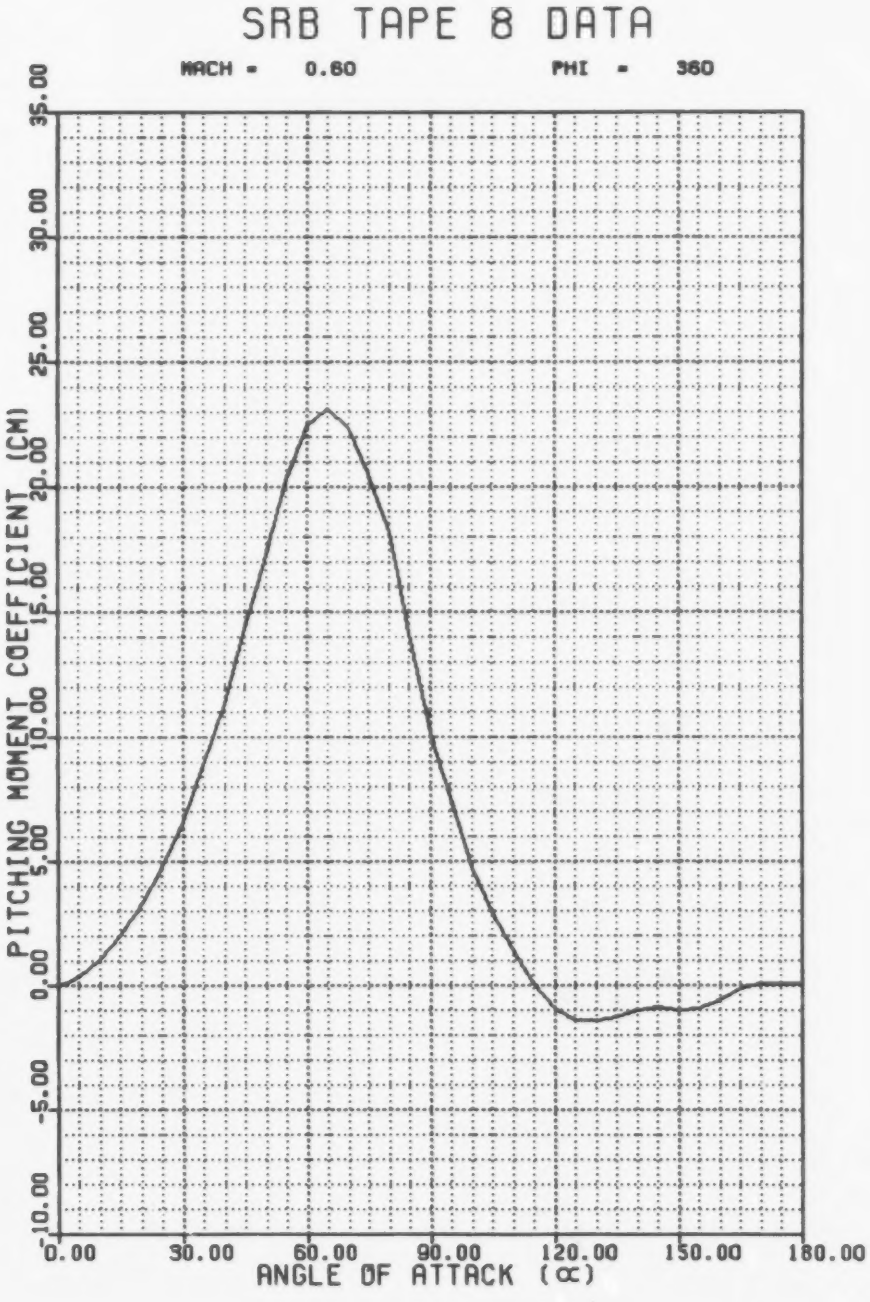
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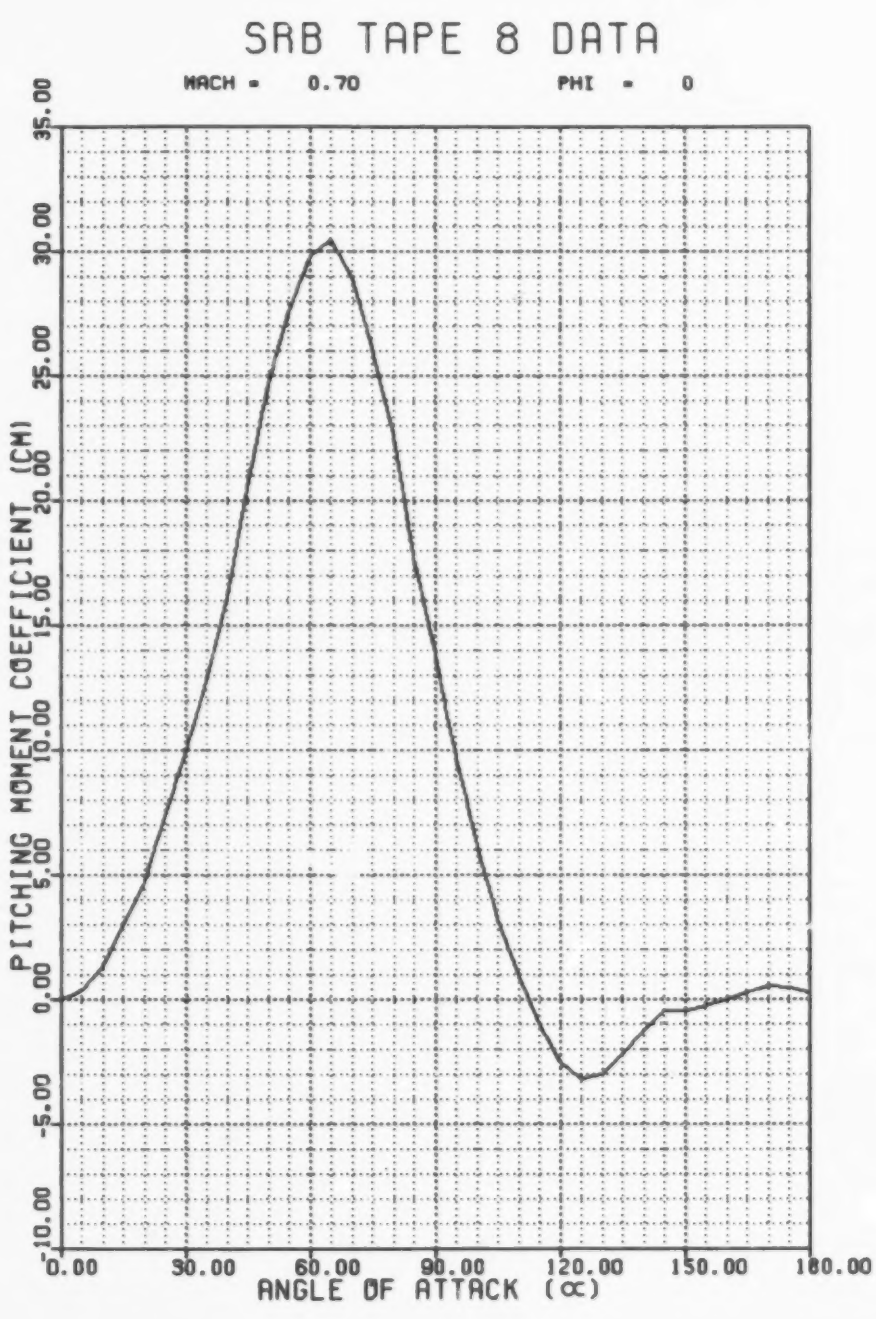
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120.00
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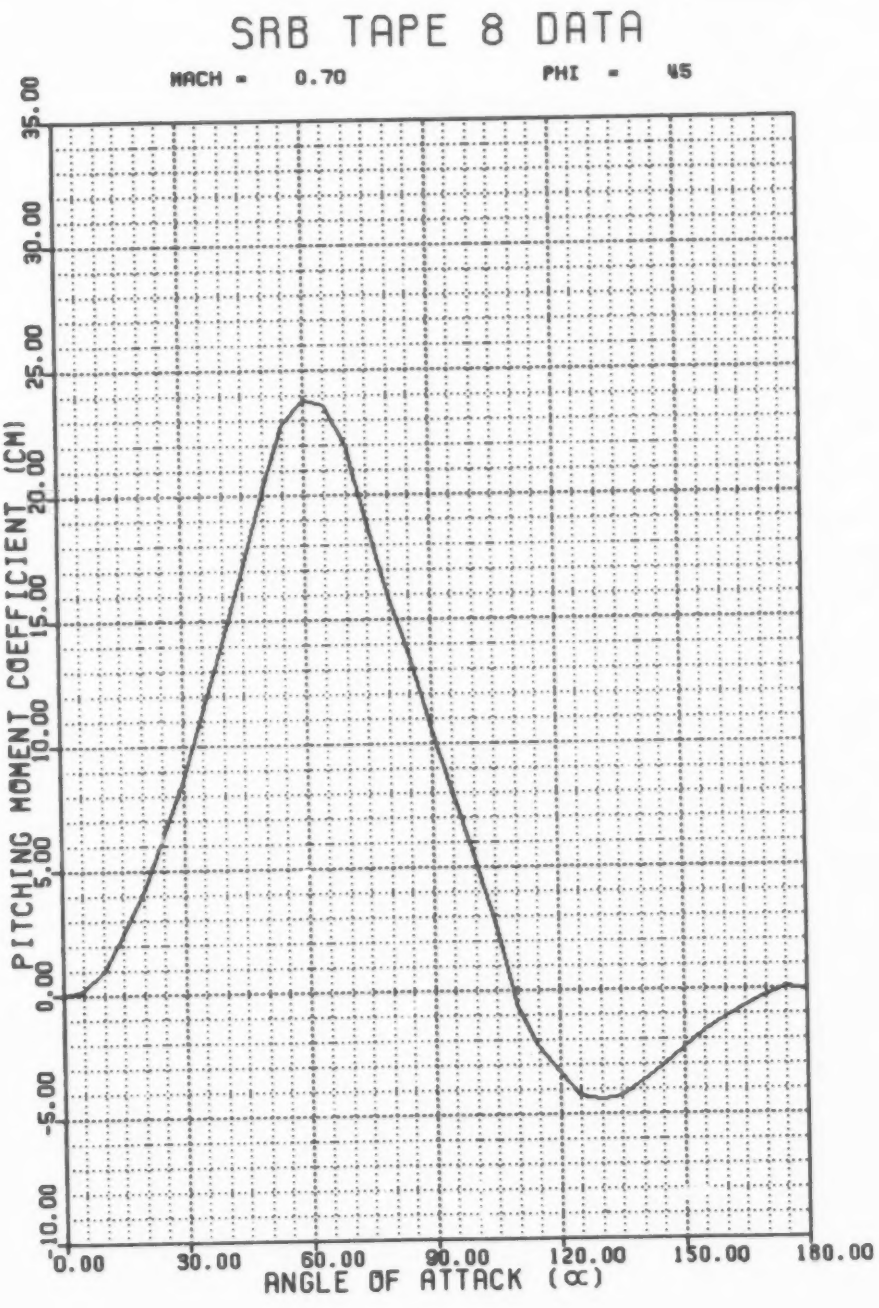
180.00
ANGLE OF ATTACK (α)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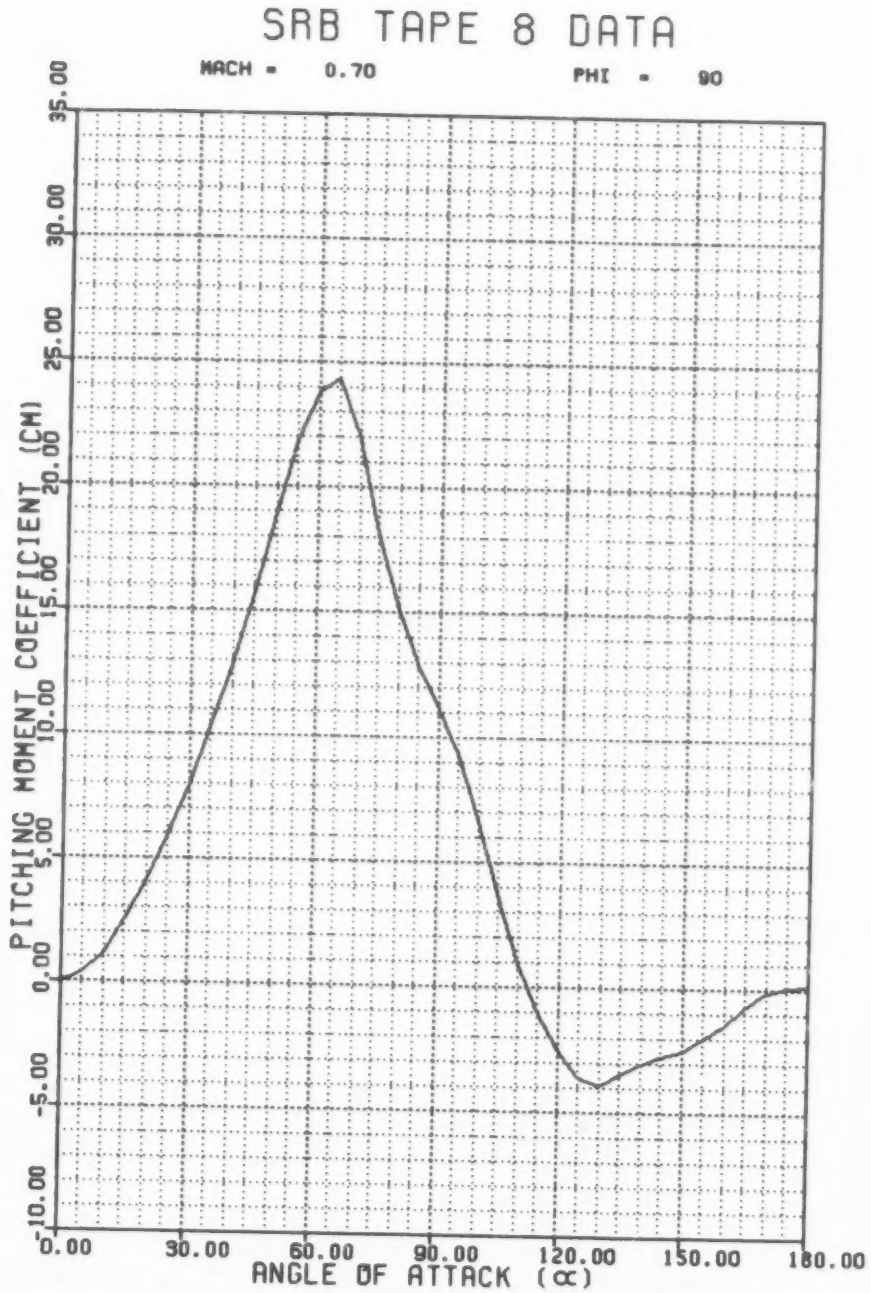
ANGLE OF ATTACK (α)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120.00
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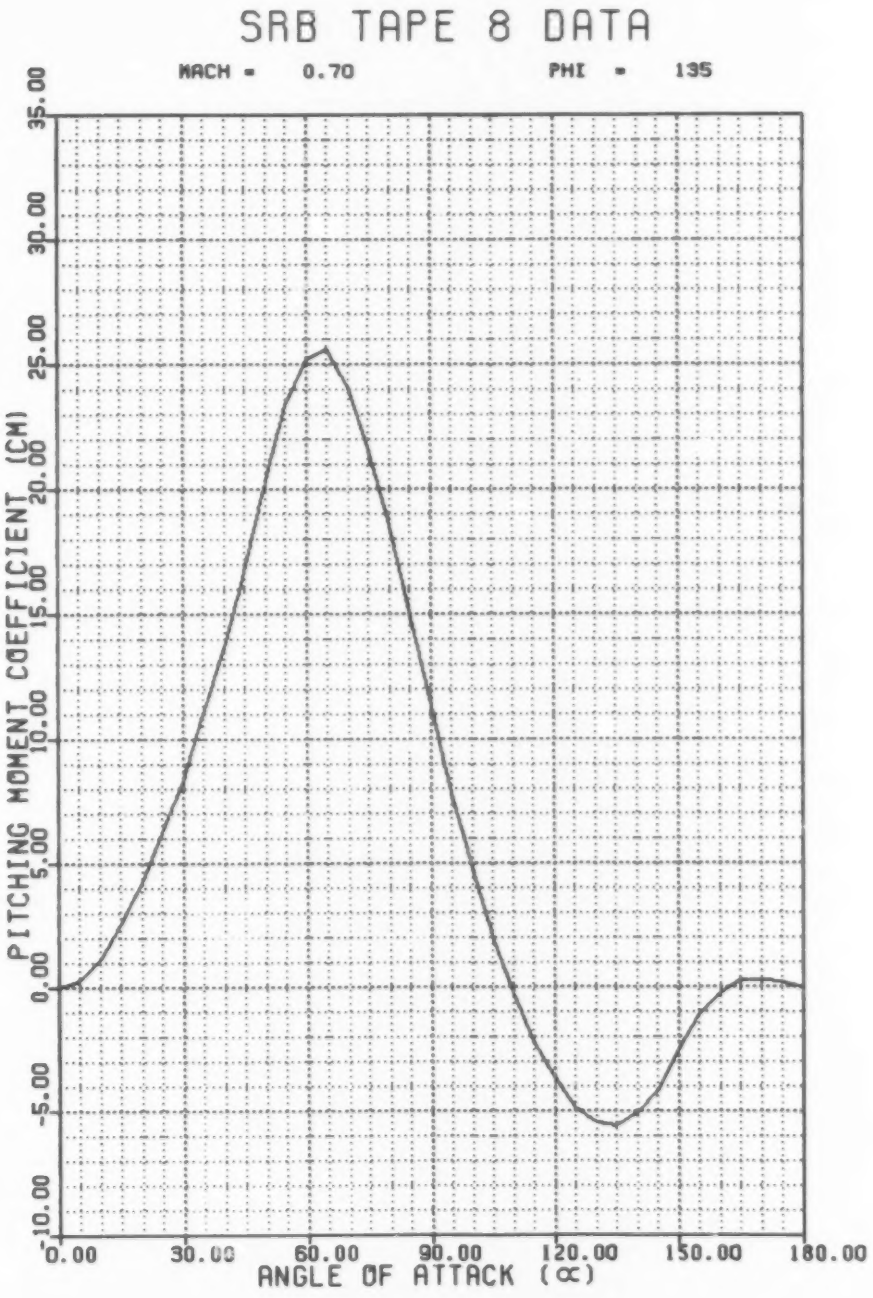
180.00
ANGLE OF ATTACK (α)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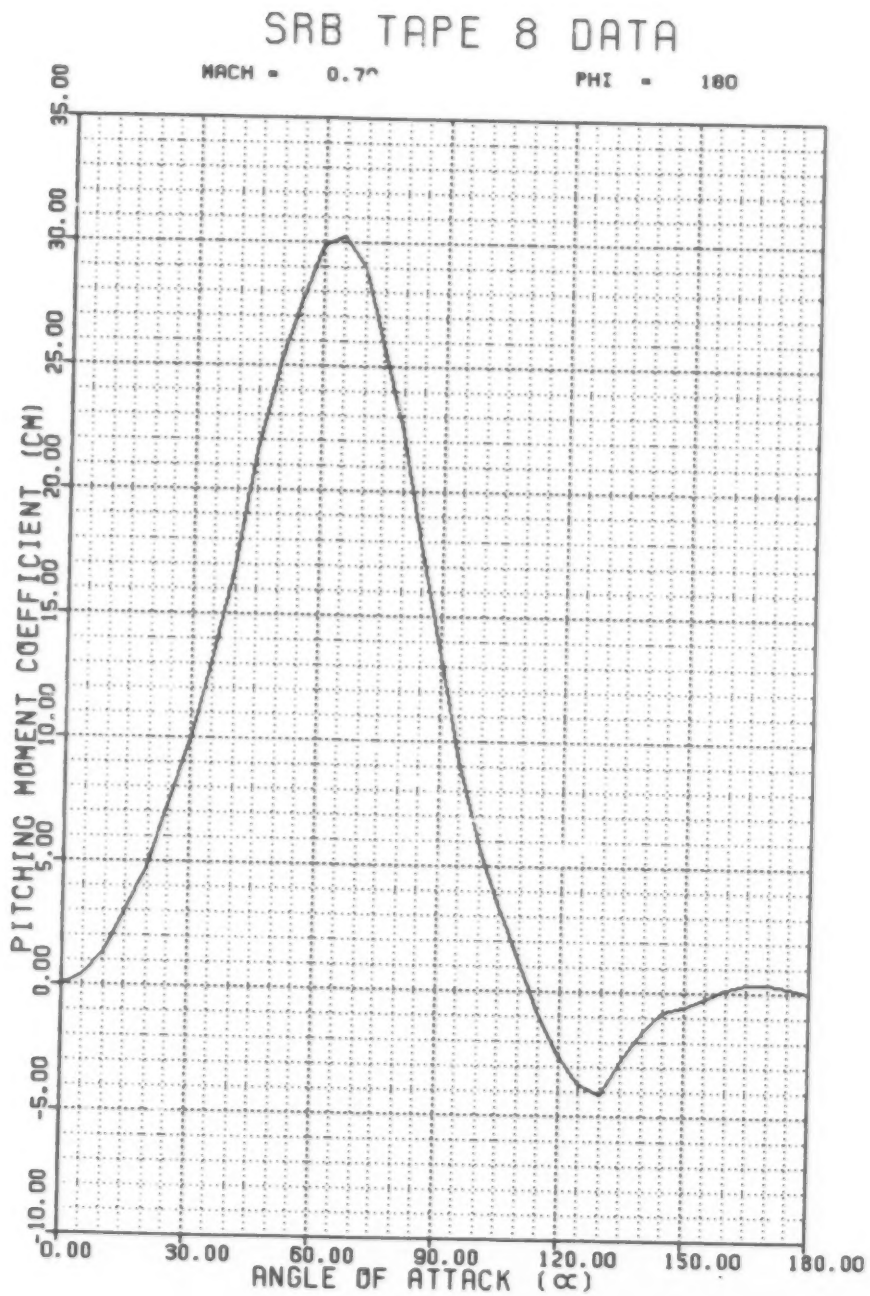
ANGLE OF ATTACK (α)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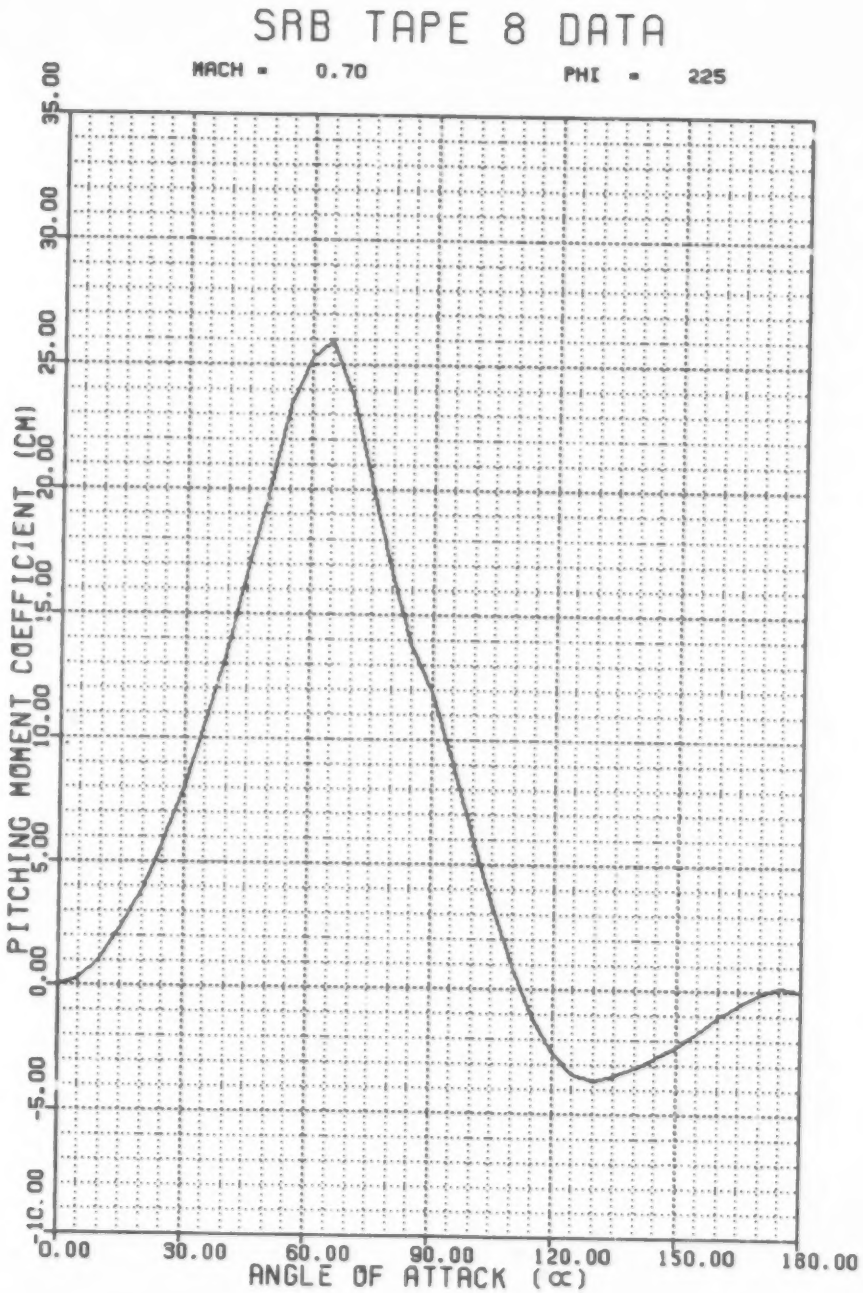
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 225
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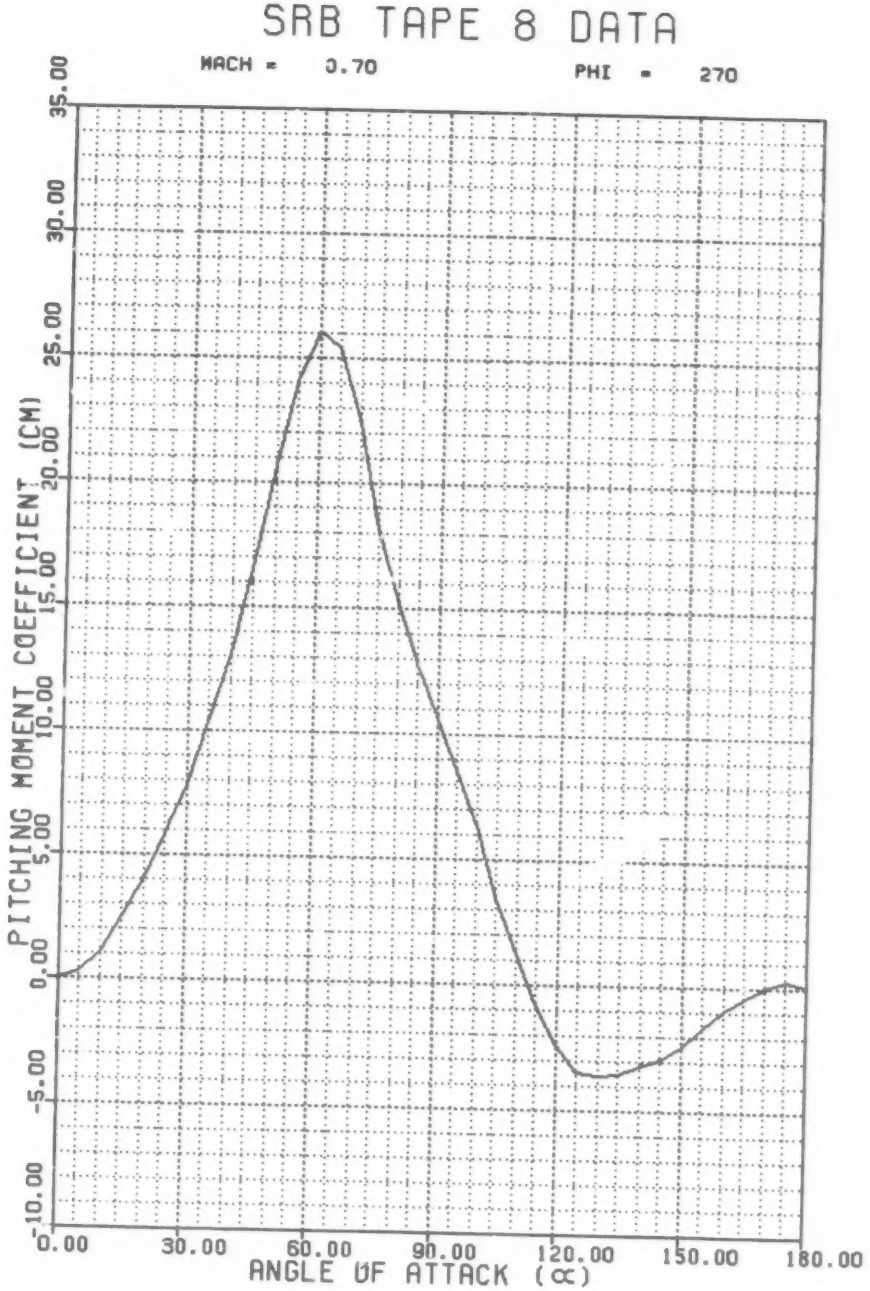
ANGLE OF ATTACK (α)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120.00
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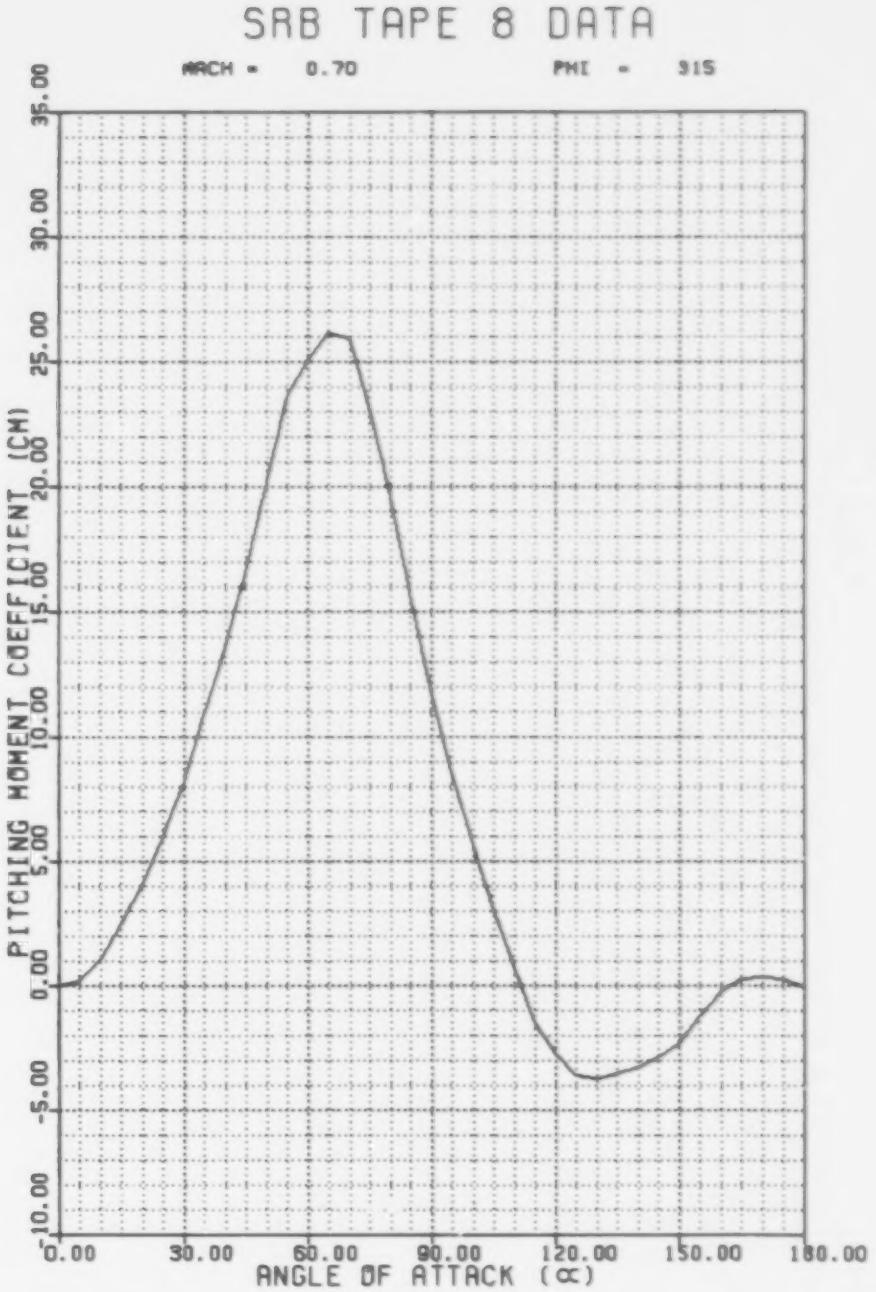
ANGLE OF ATTACK (α)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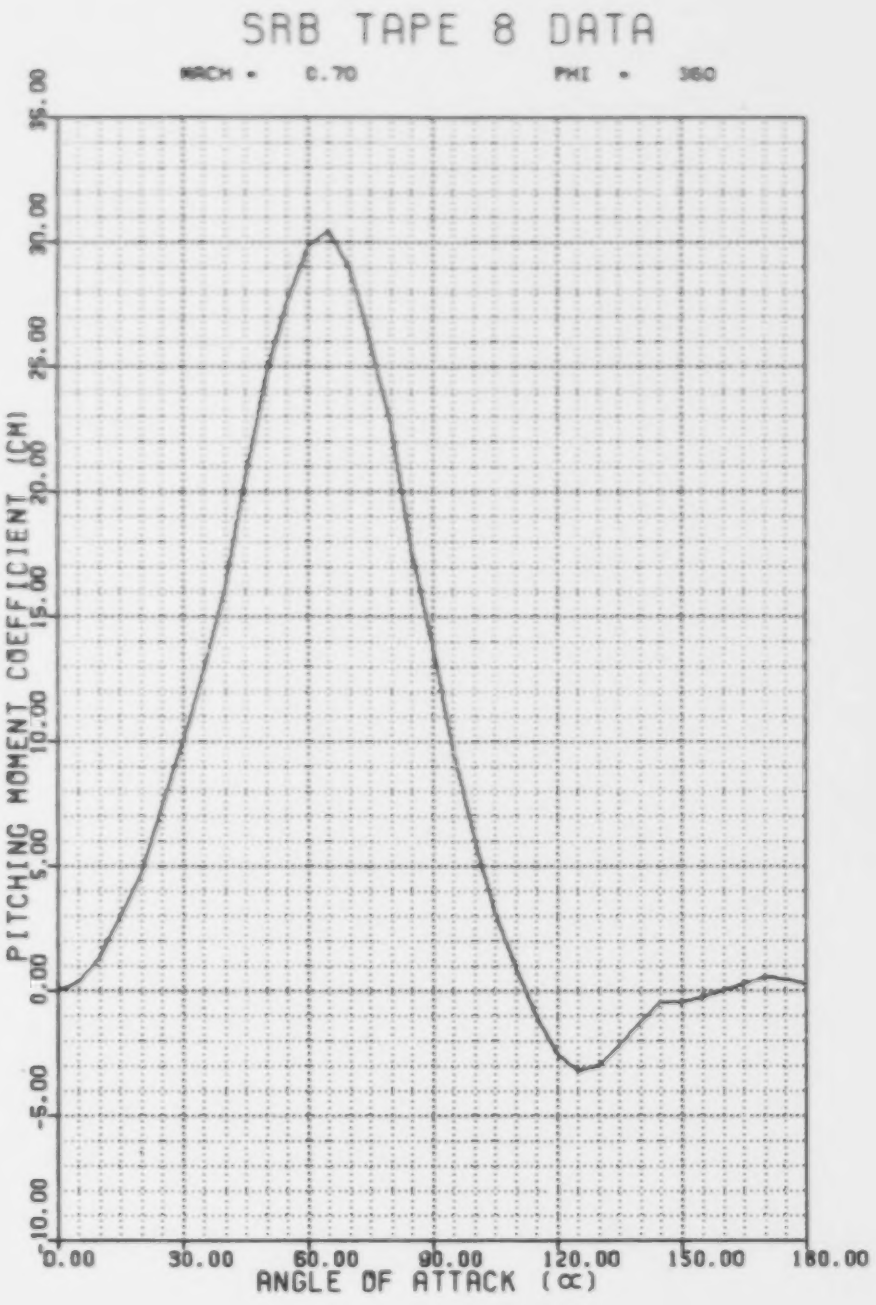
150.00
180.00
ANGLE OF ATTACK (α)

C-3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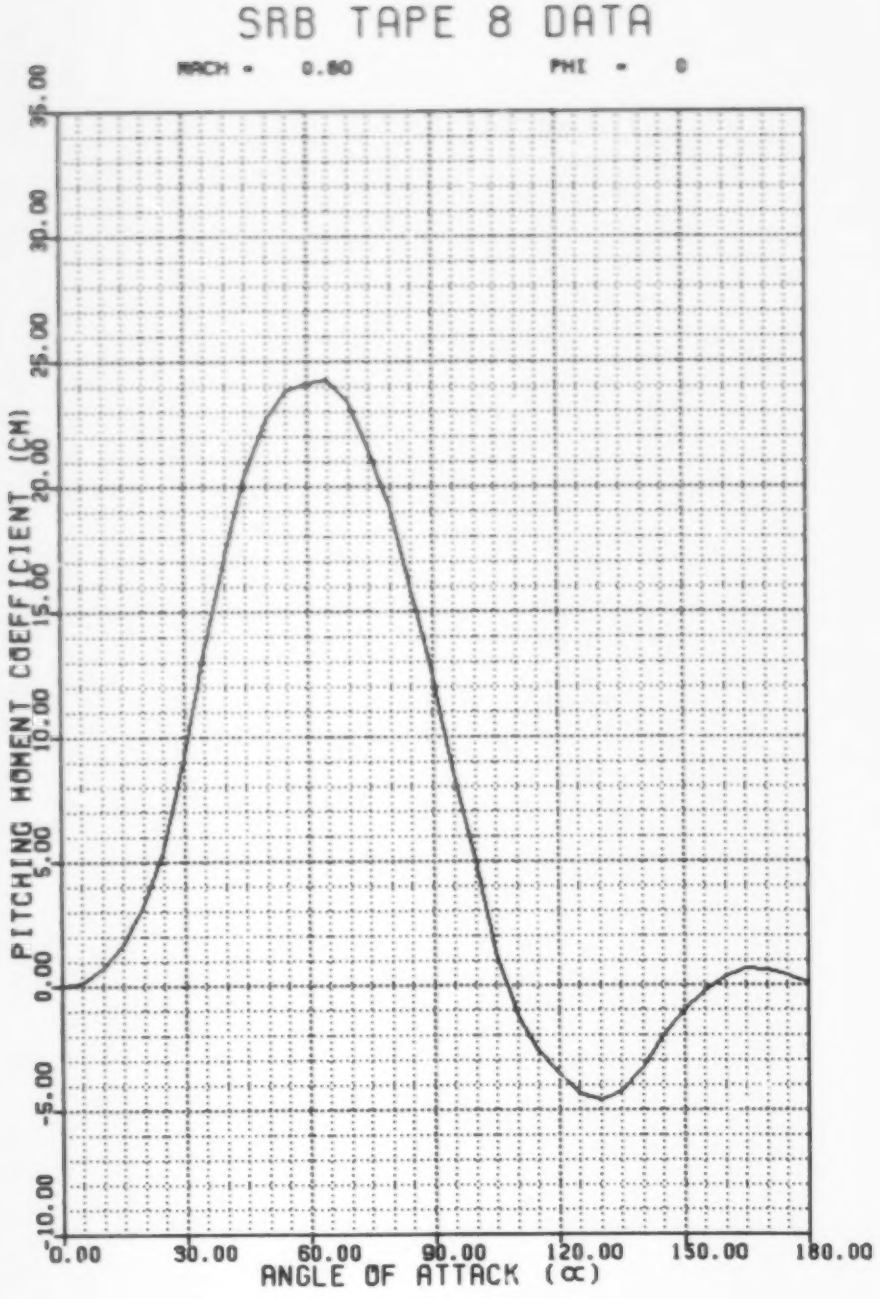
ANGLE OF ATTACK (α)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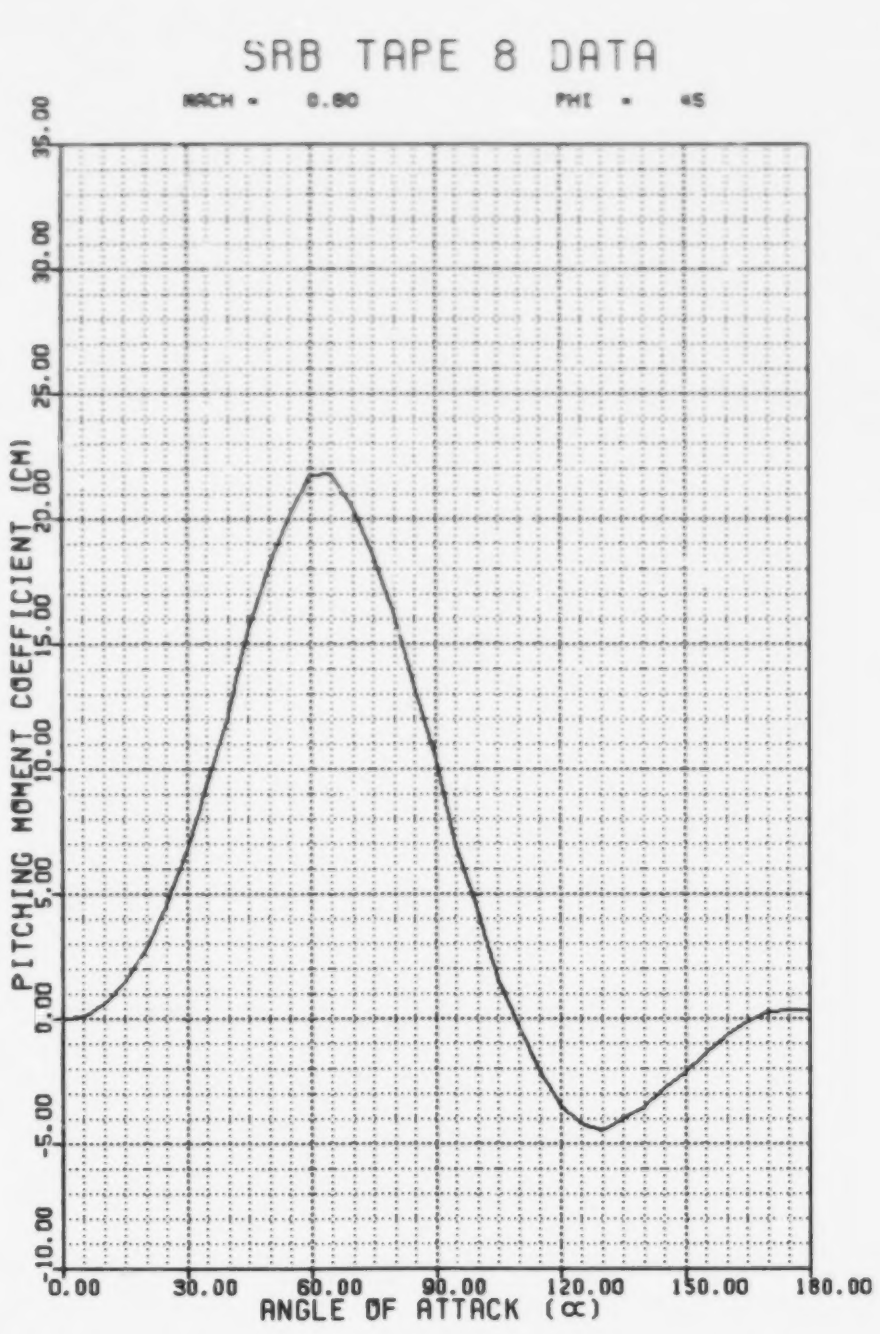
ANGLE OF ATTACK (α)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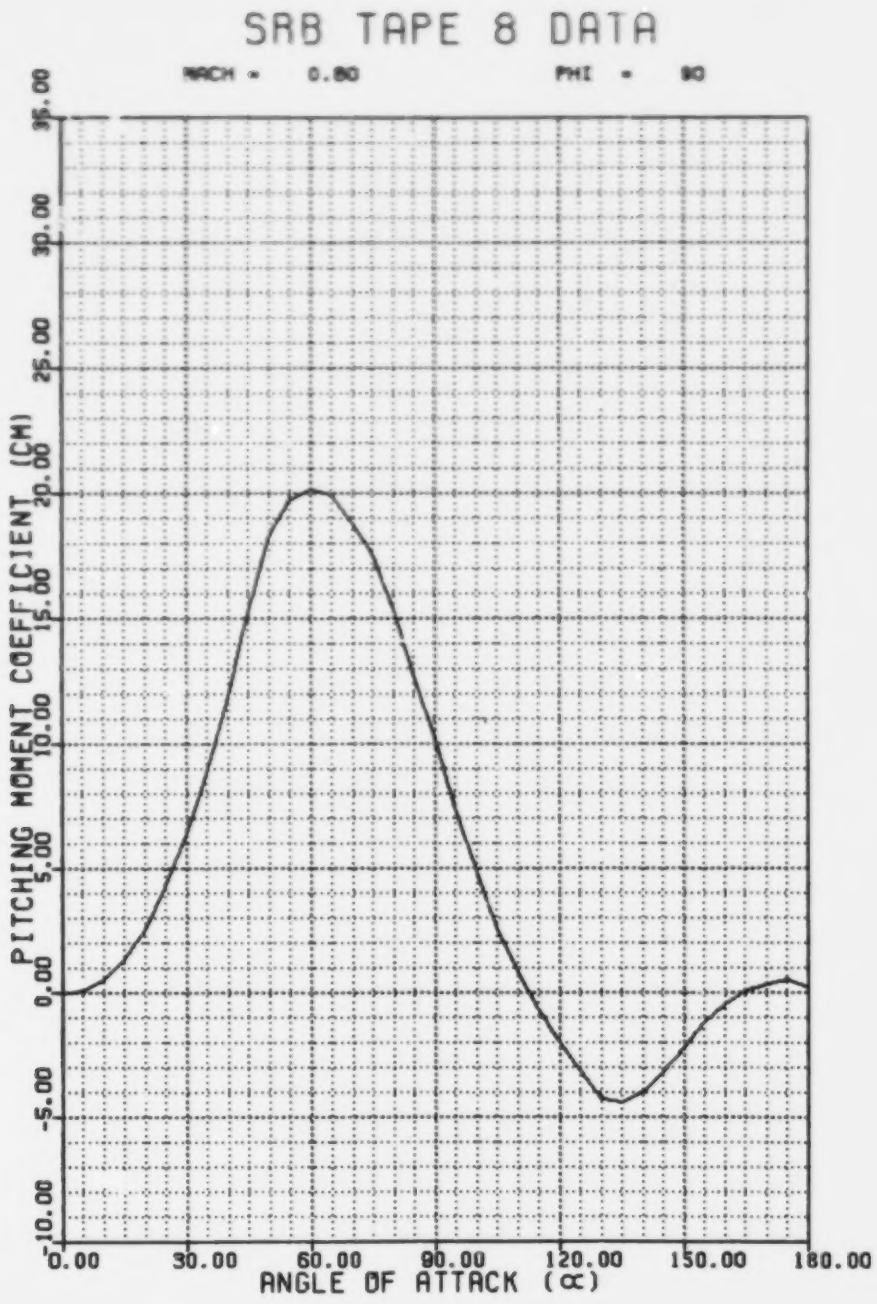
ANGLE OF ATTACK (α)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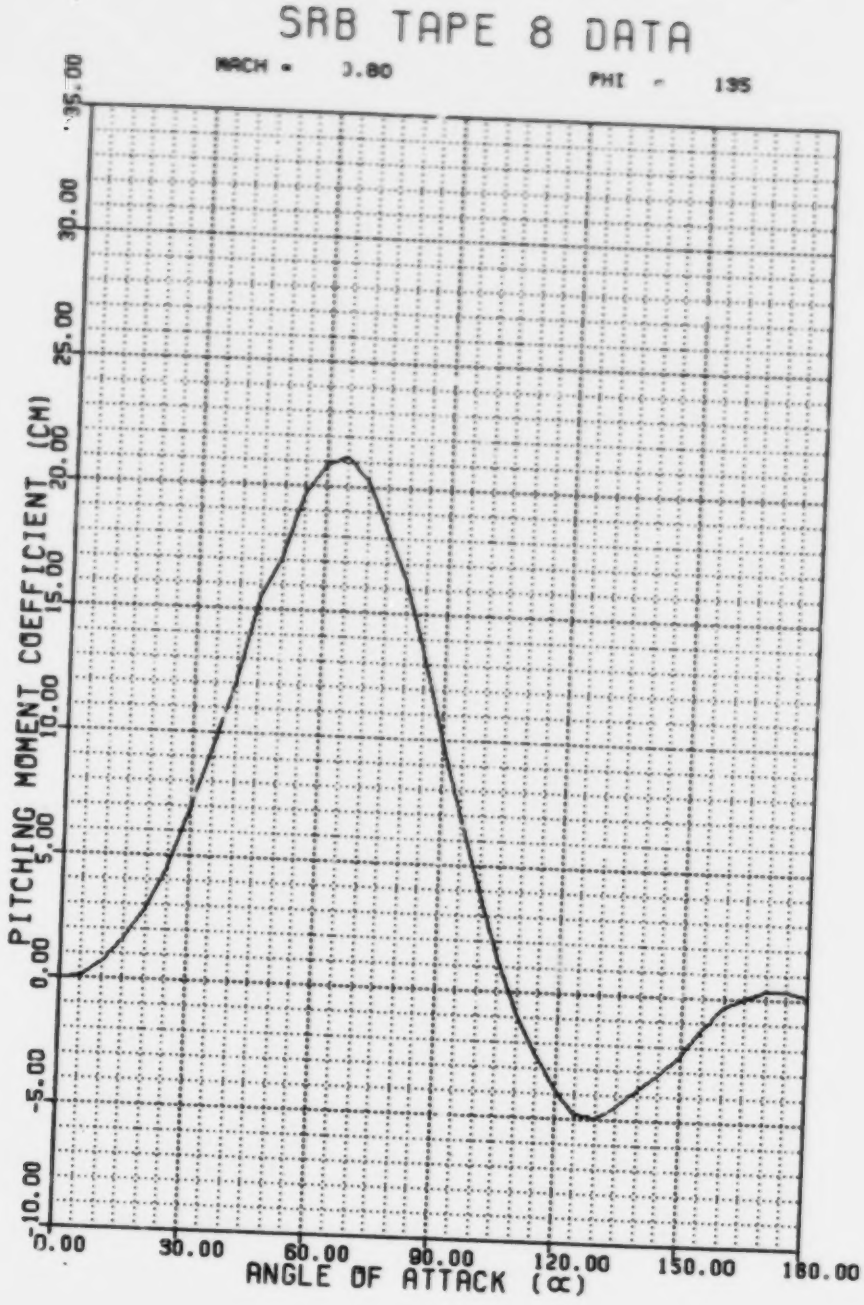
ANGLE OF ATTACK (α)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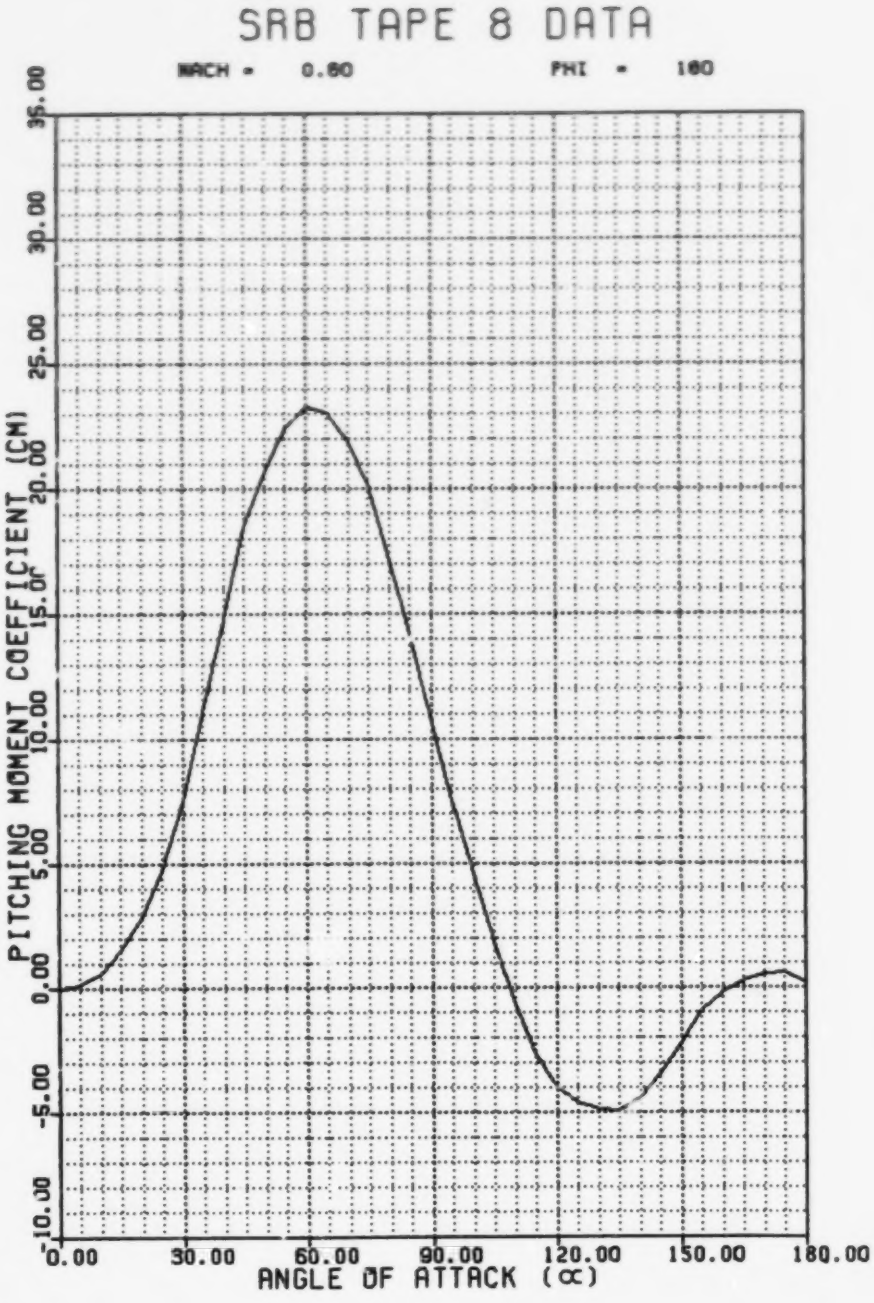
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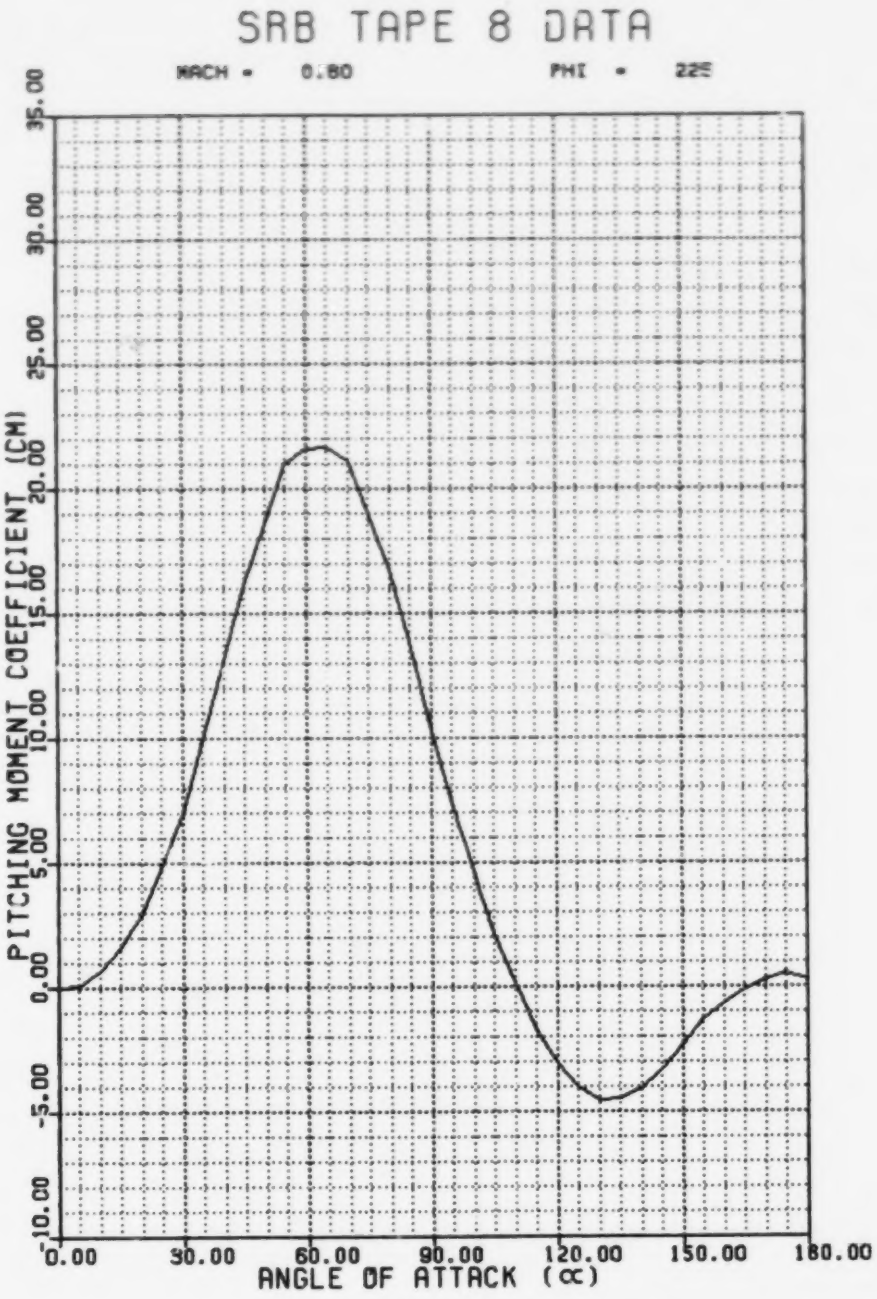
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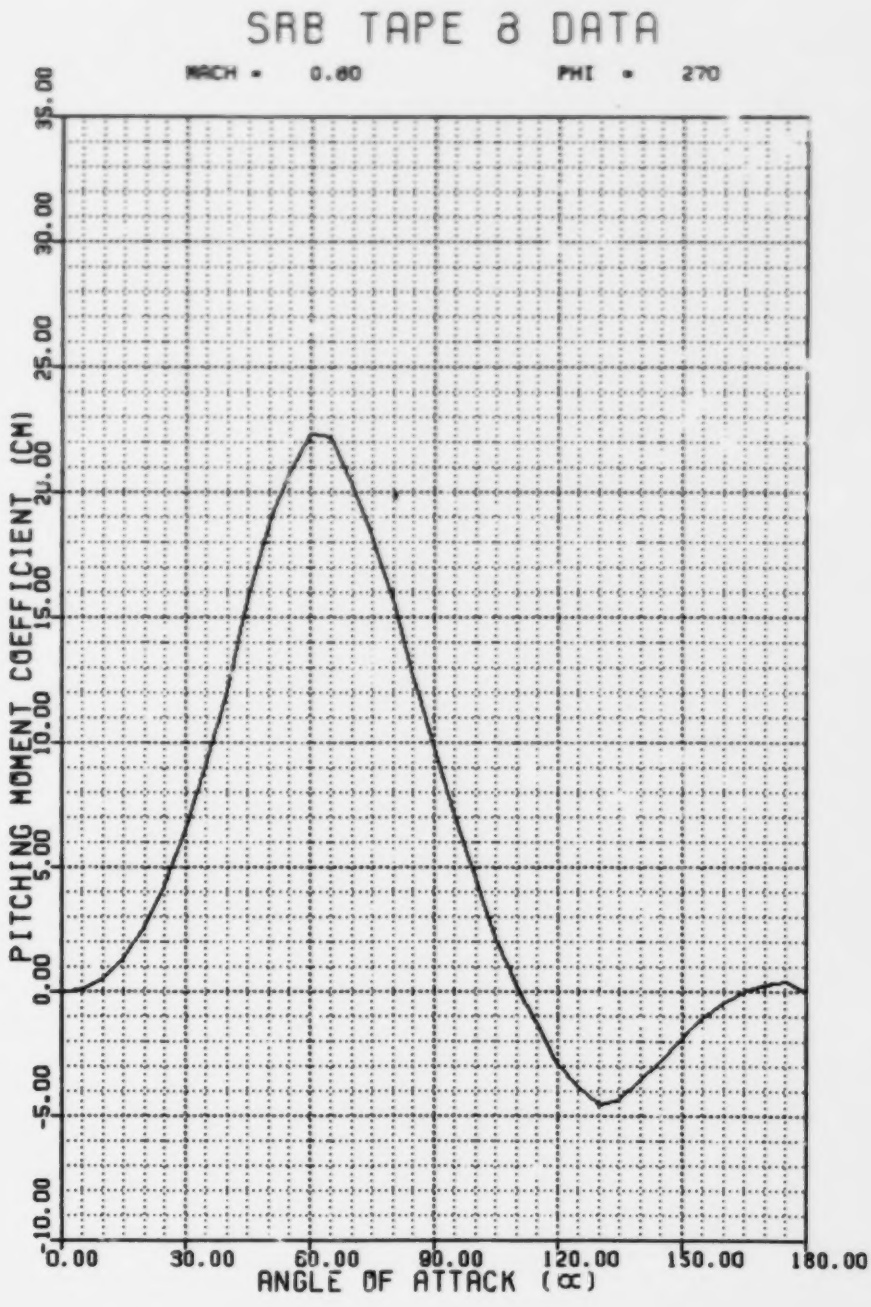
ANGLE OF ATTACK (α)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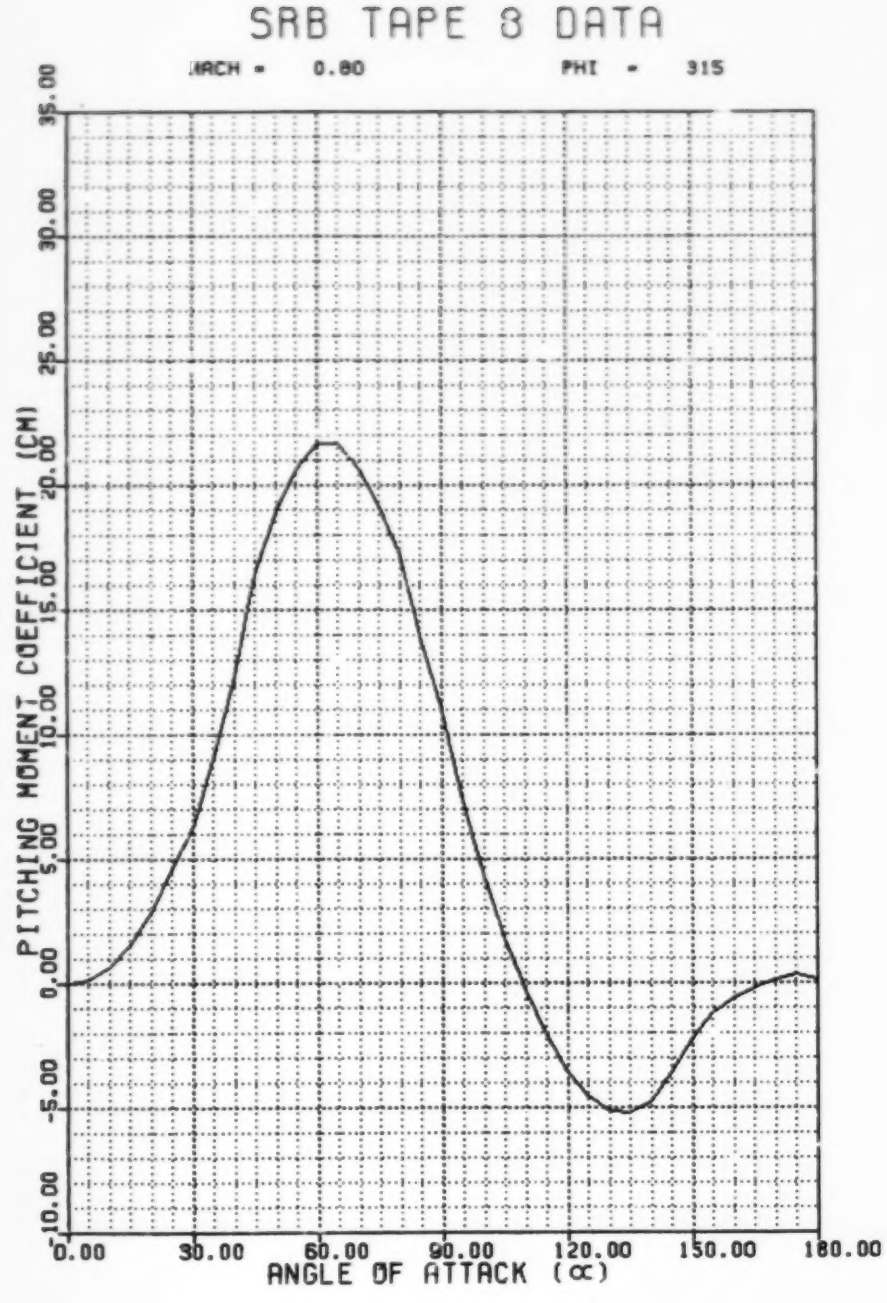
ANGLE OF ATTACK (α)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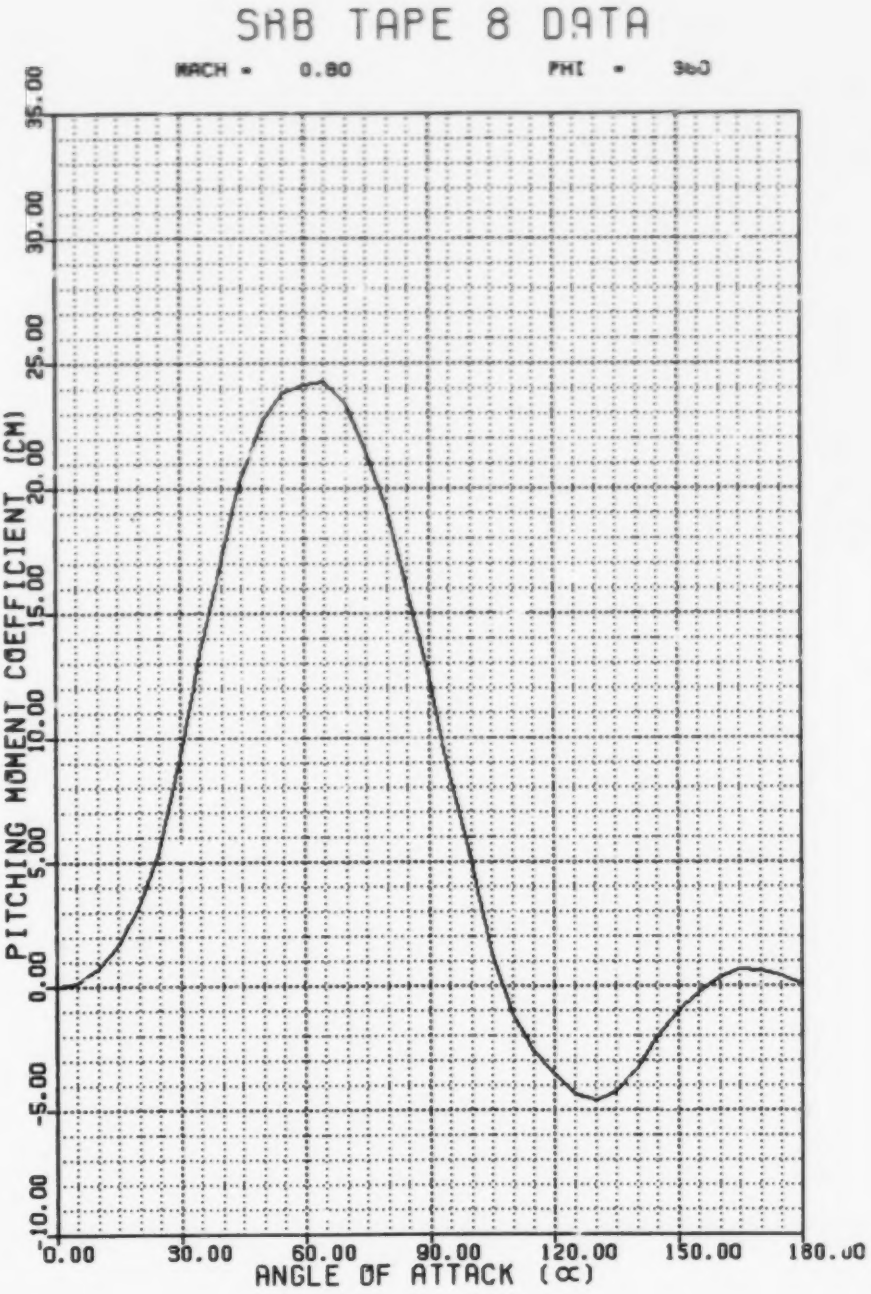
ANGLE OF ATTACK (α)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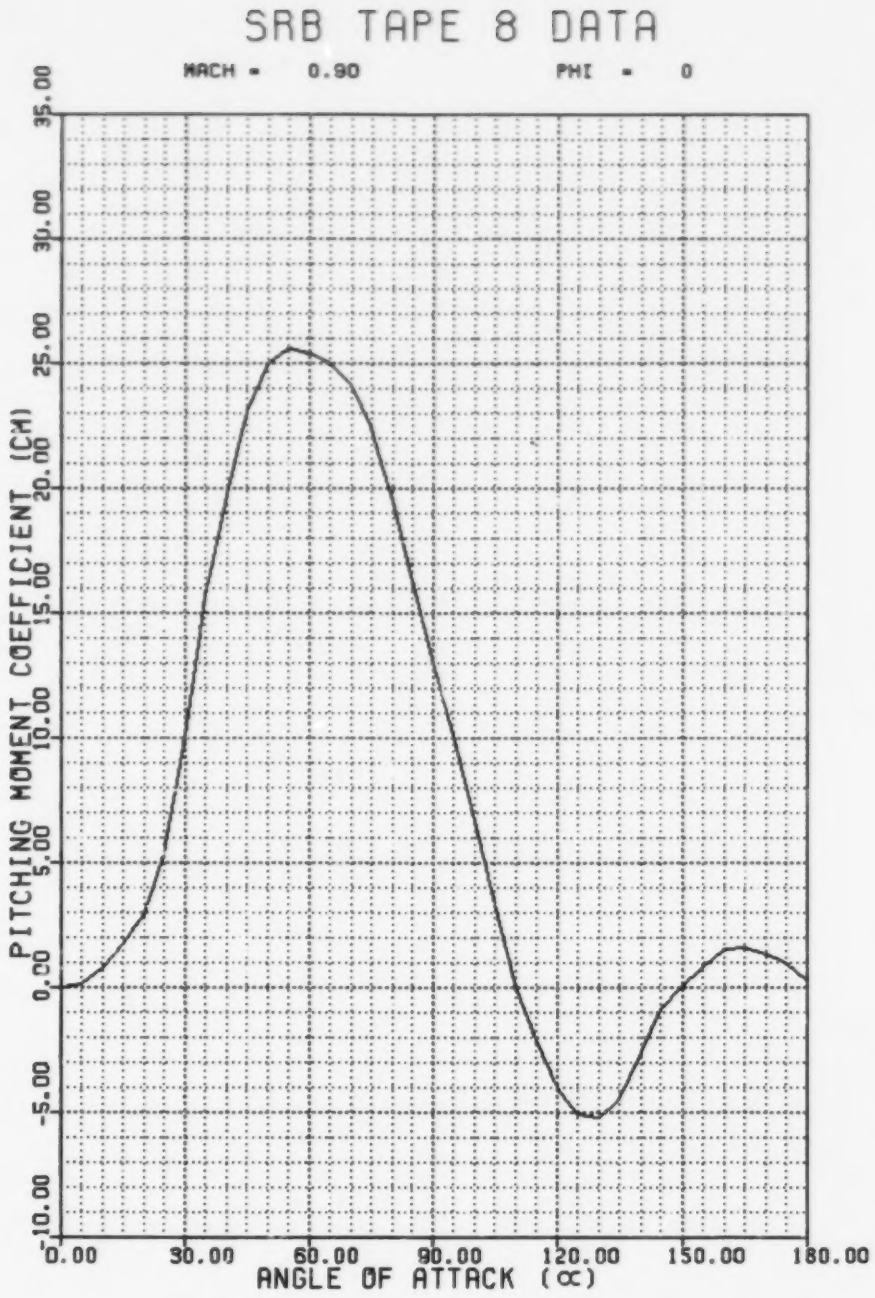
ANGLE OF ATTACK (α)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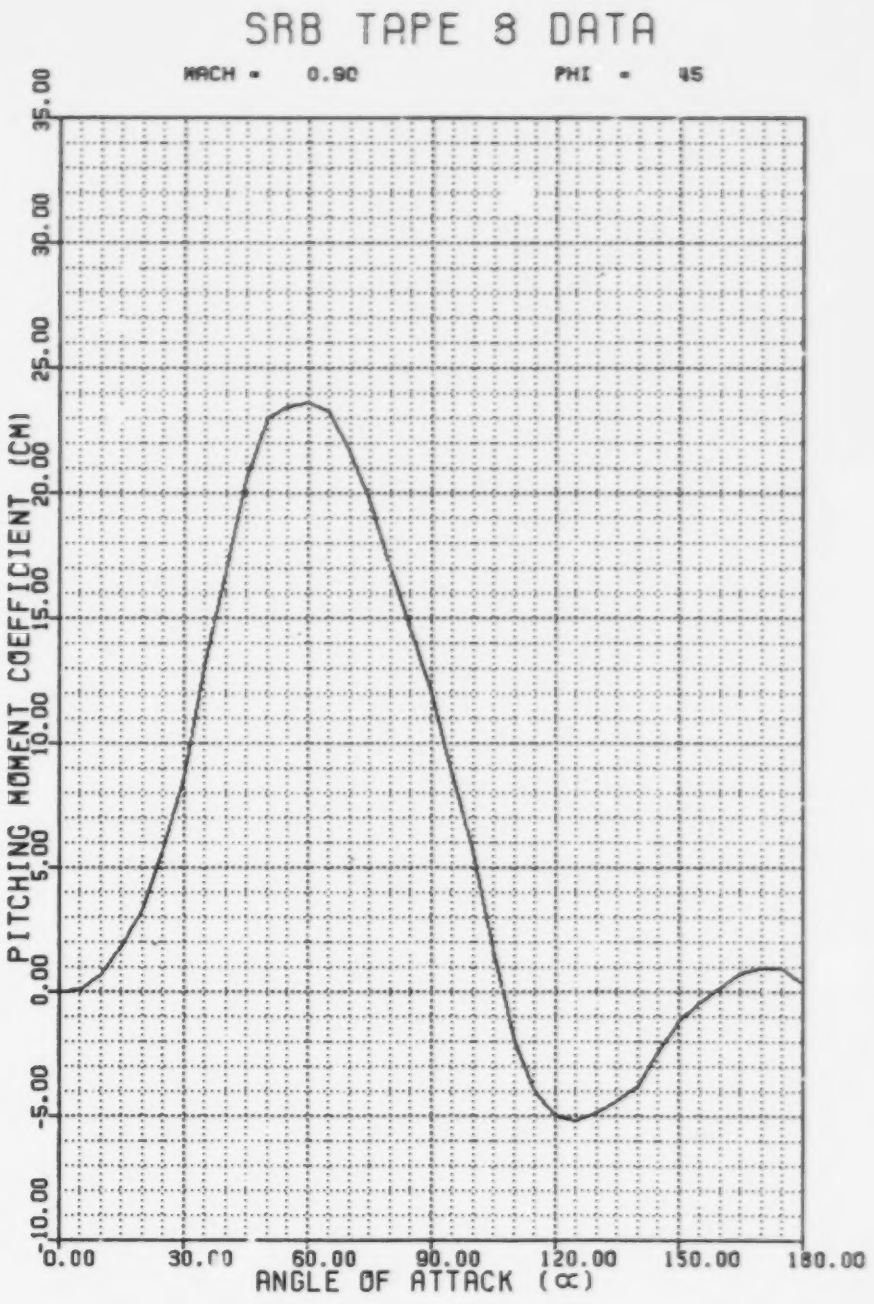
ANGLE OF ATTACK (α)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90.00
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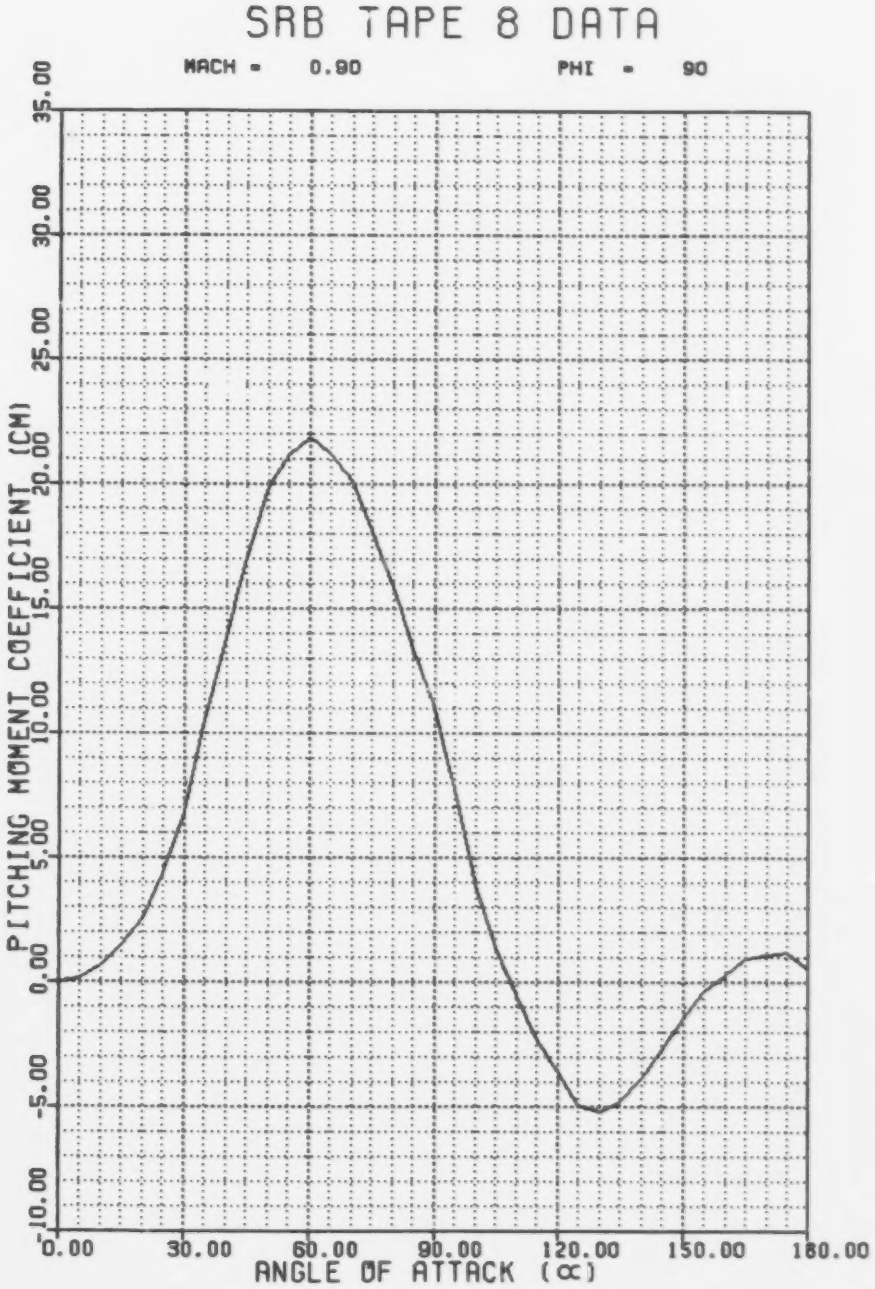
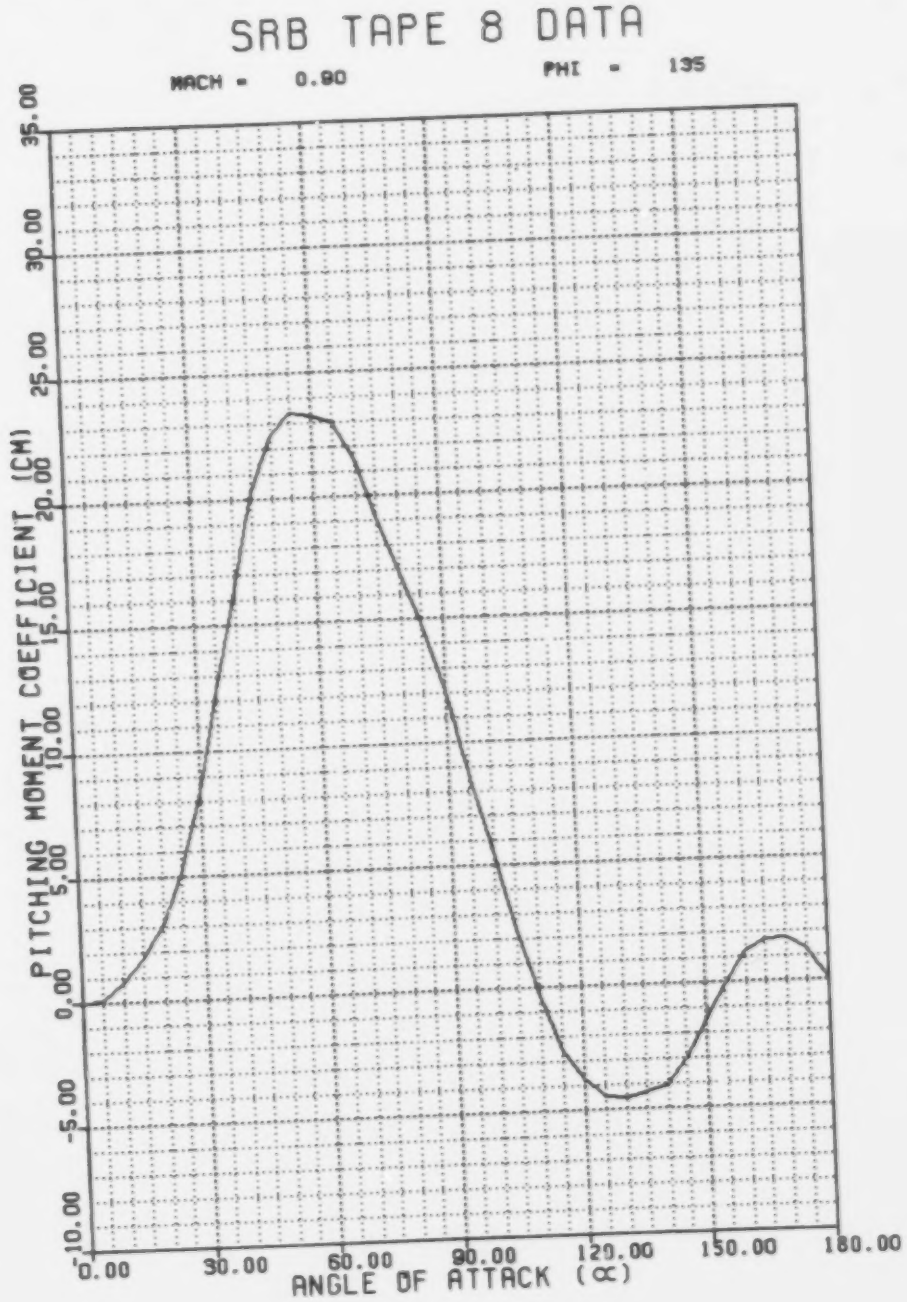
150.00
180.00
ANGLE OF ATTACK (α)

ORIGINAL PAGE IS
OF POOR QUALITY

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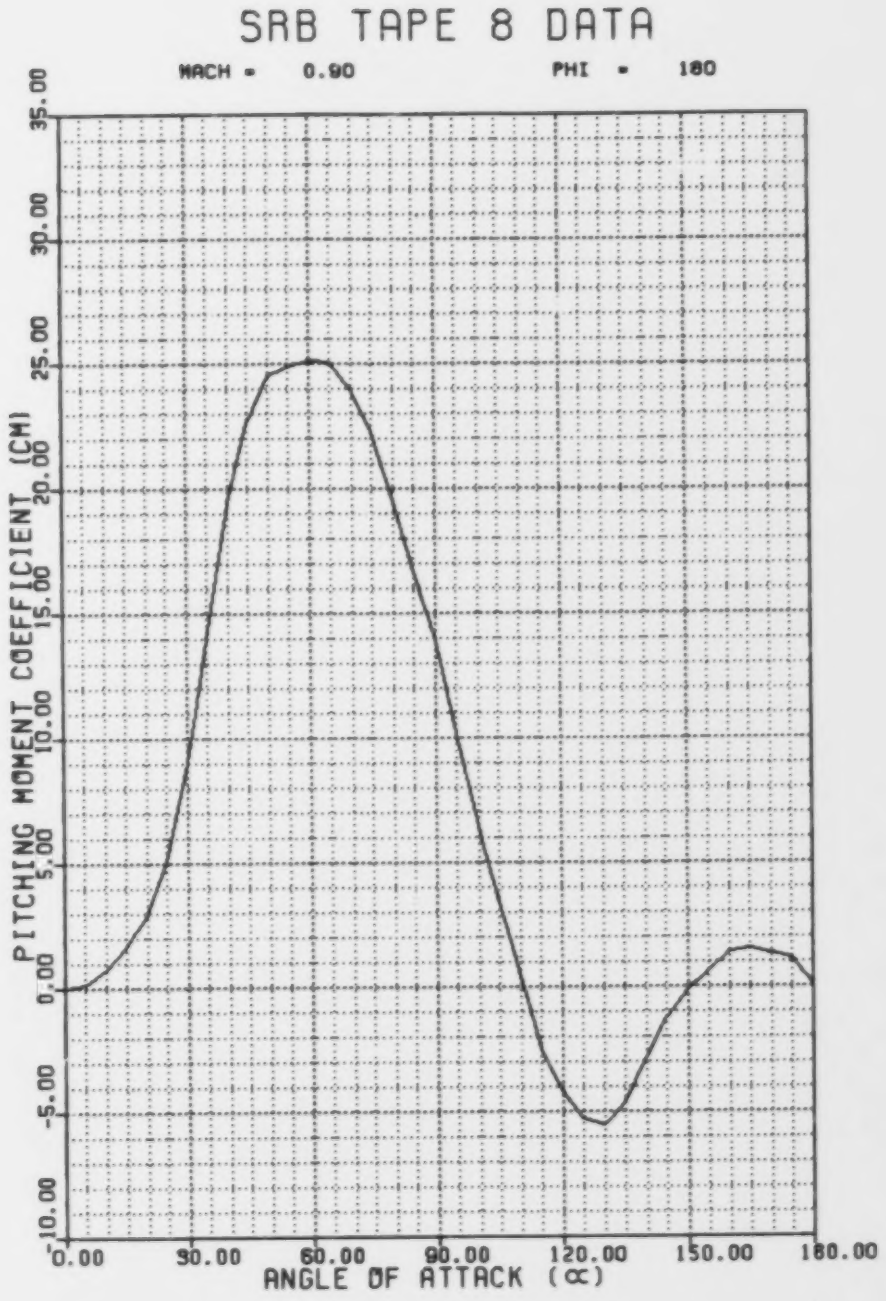
ANGLE OF ATTACK (α)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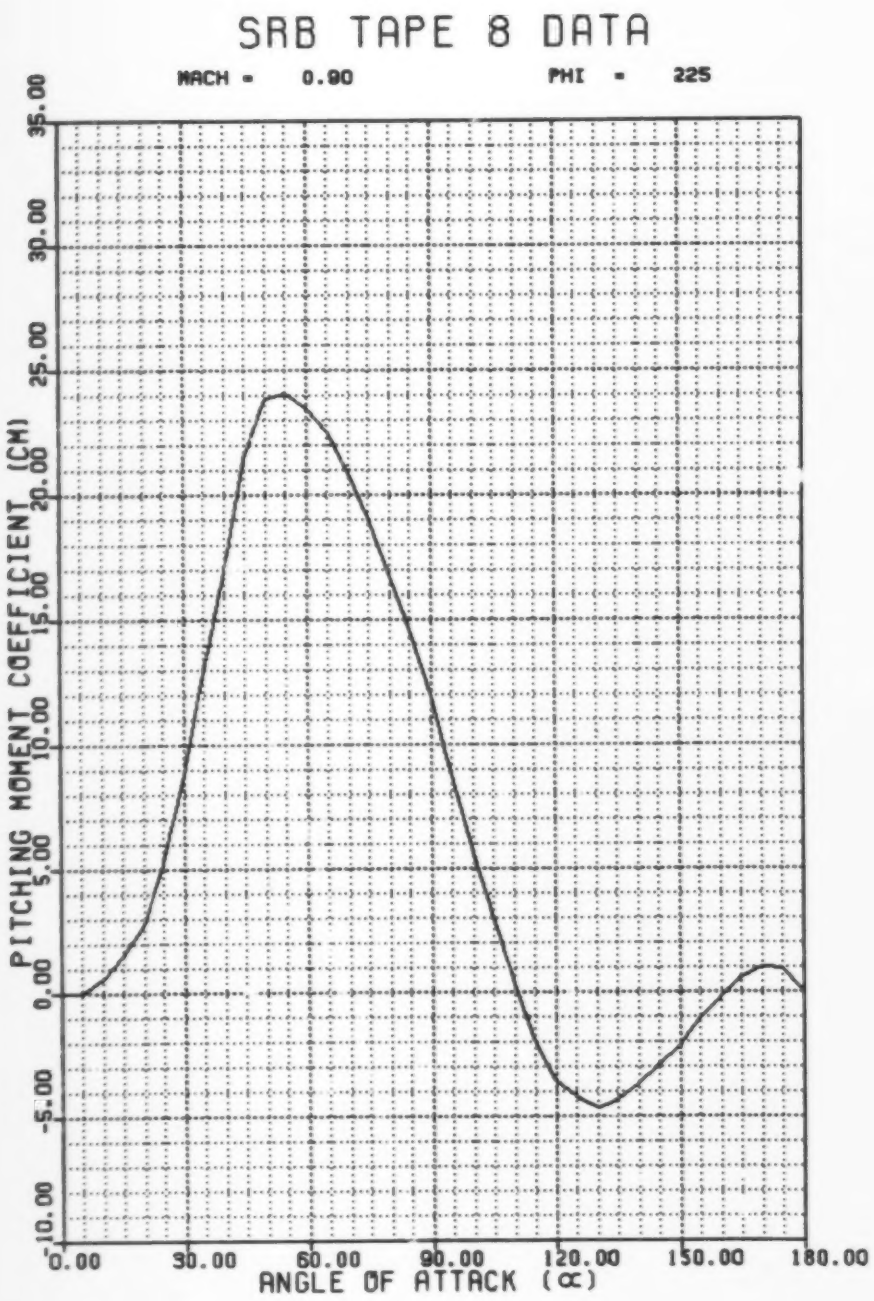
ANGLE OF ATTACK (α)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PHI = 225
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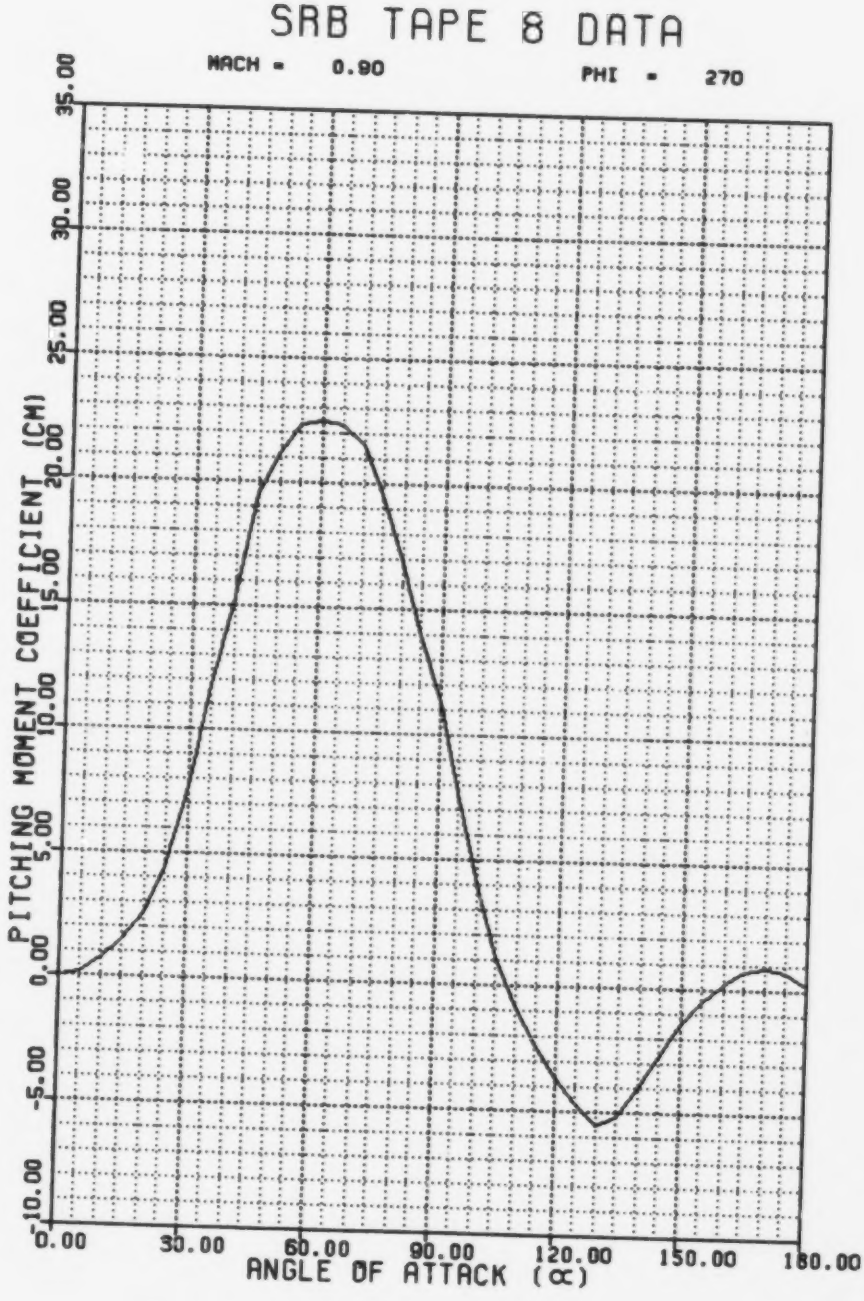
ANGLE OF ATTACK (α)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PHI = 270
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150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 0.90
PHI = 315
PITCHING MOMENT COEFFICIENT (CM)
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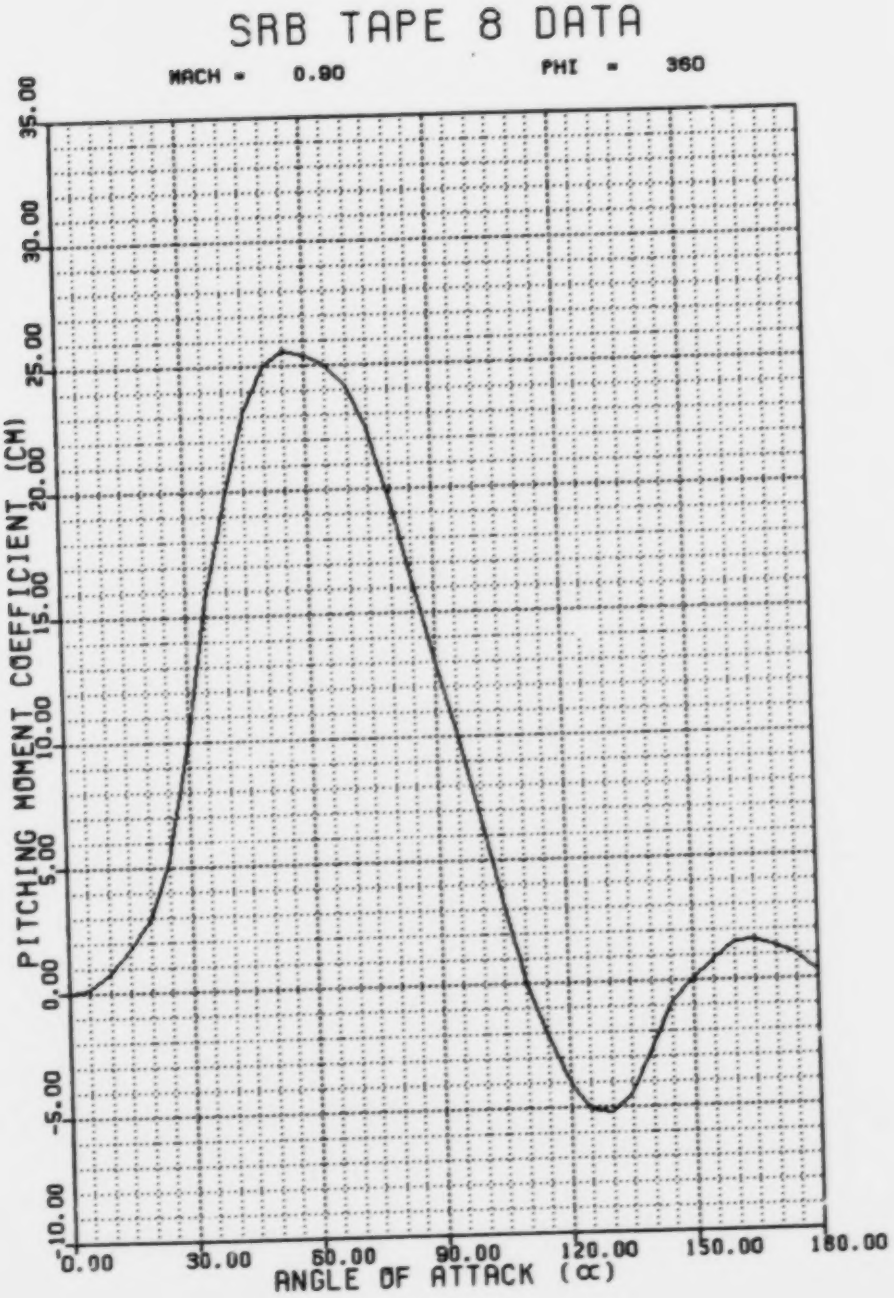
ANGLE OF ATTACK (α)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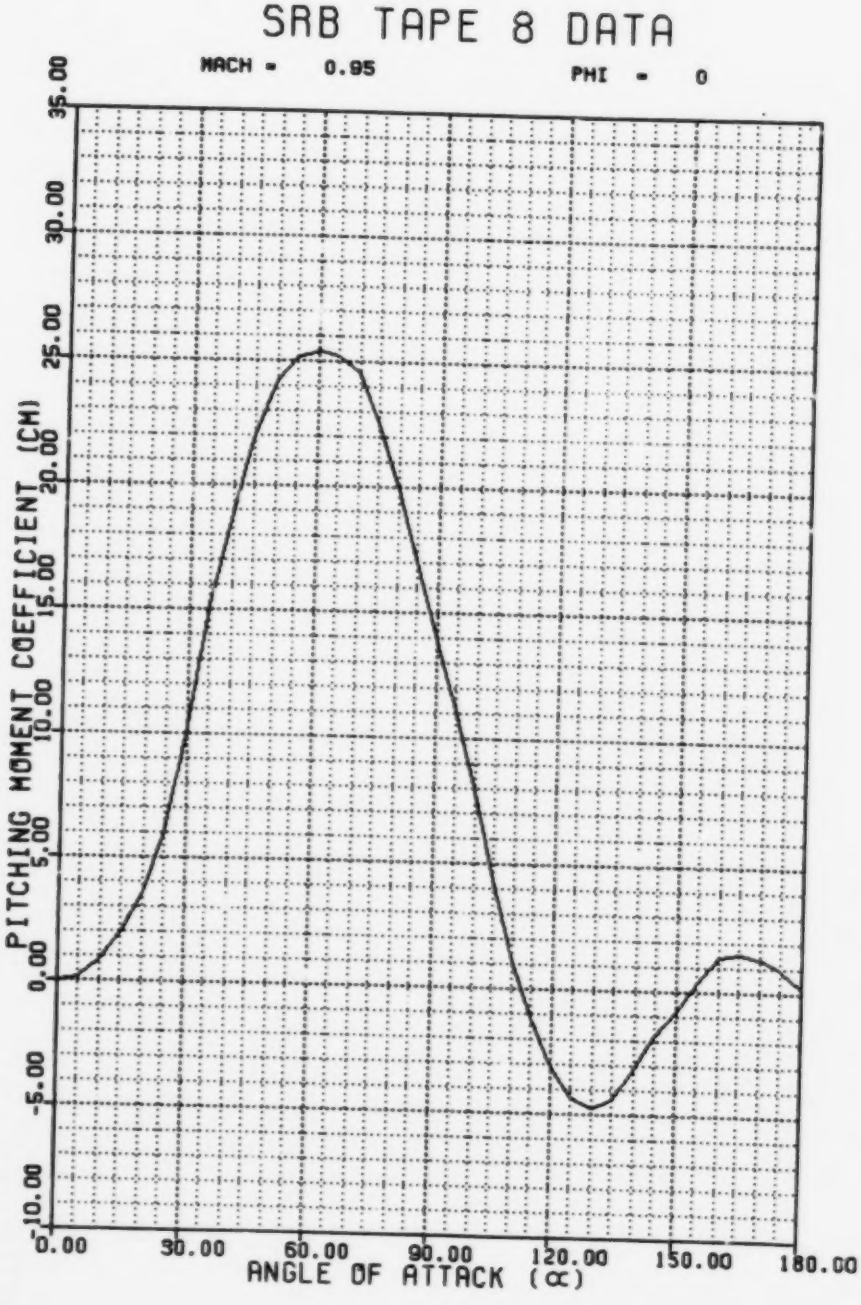
ANGLE OF ATTACK (α)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PHI = 0
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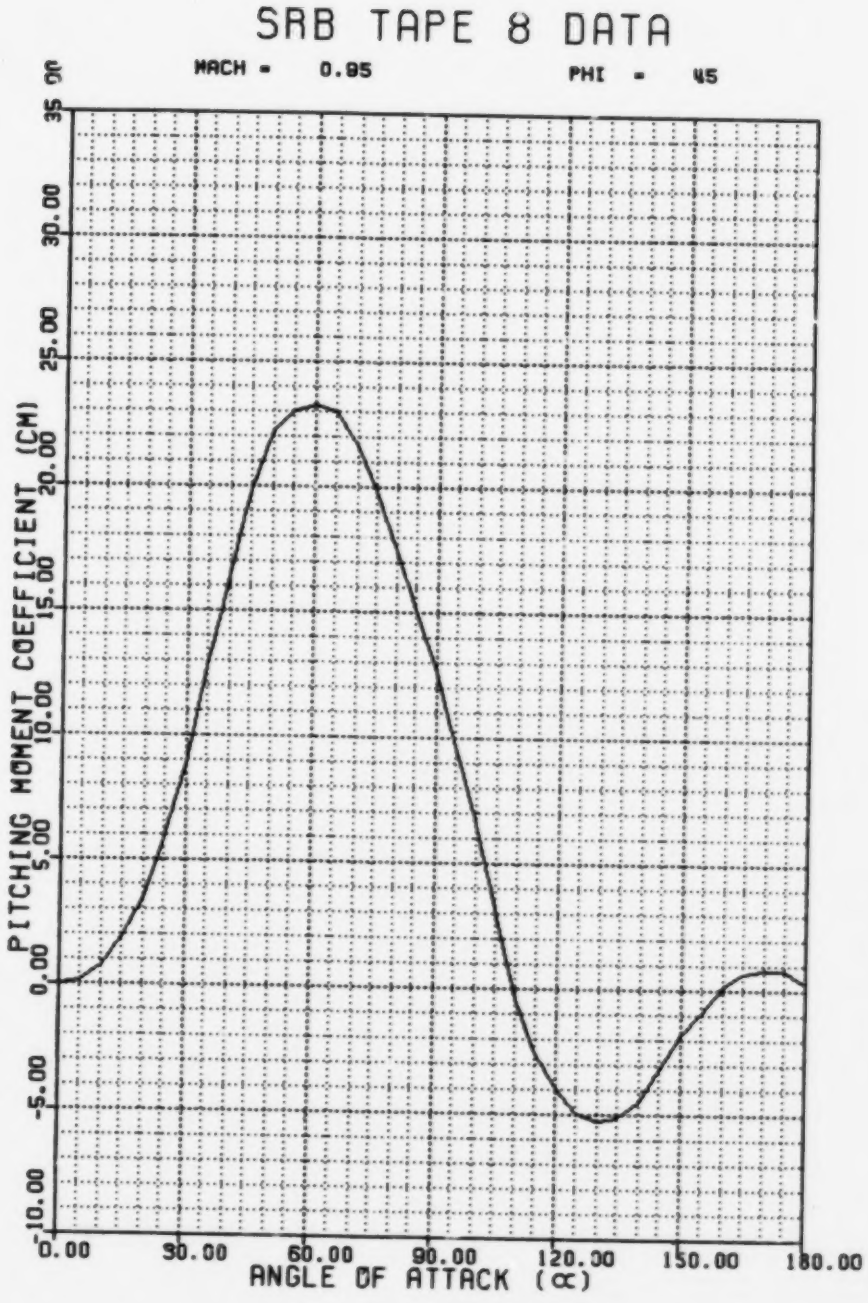
ANGLE OF ATTACK (α)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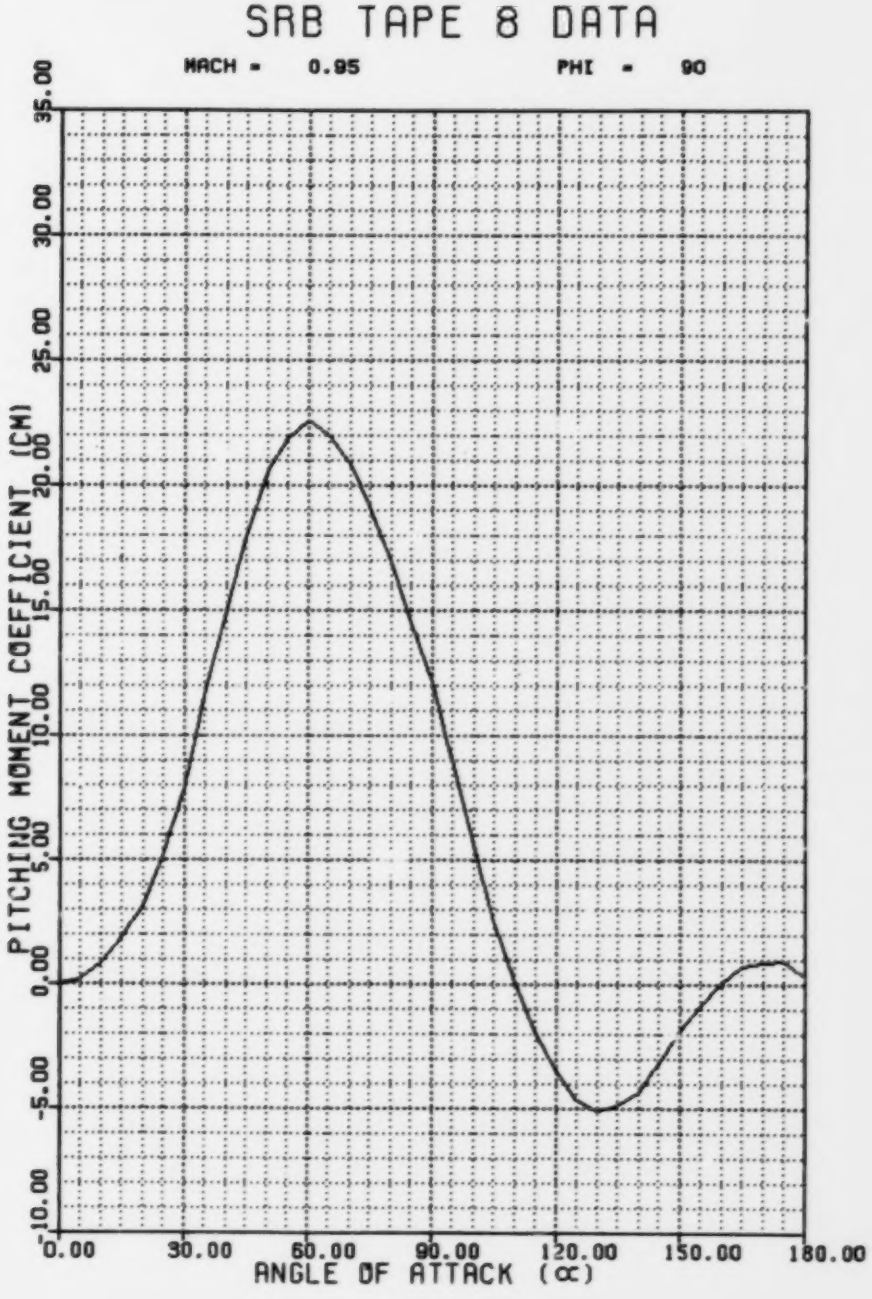
ANGLE OF ATTACK (α)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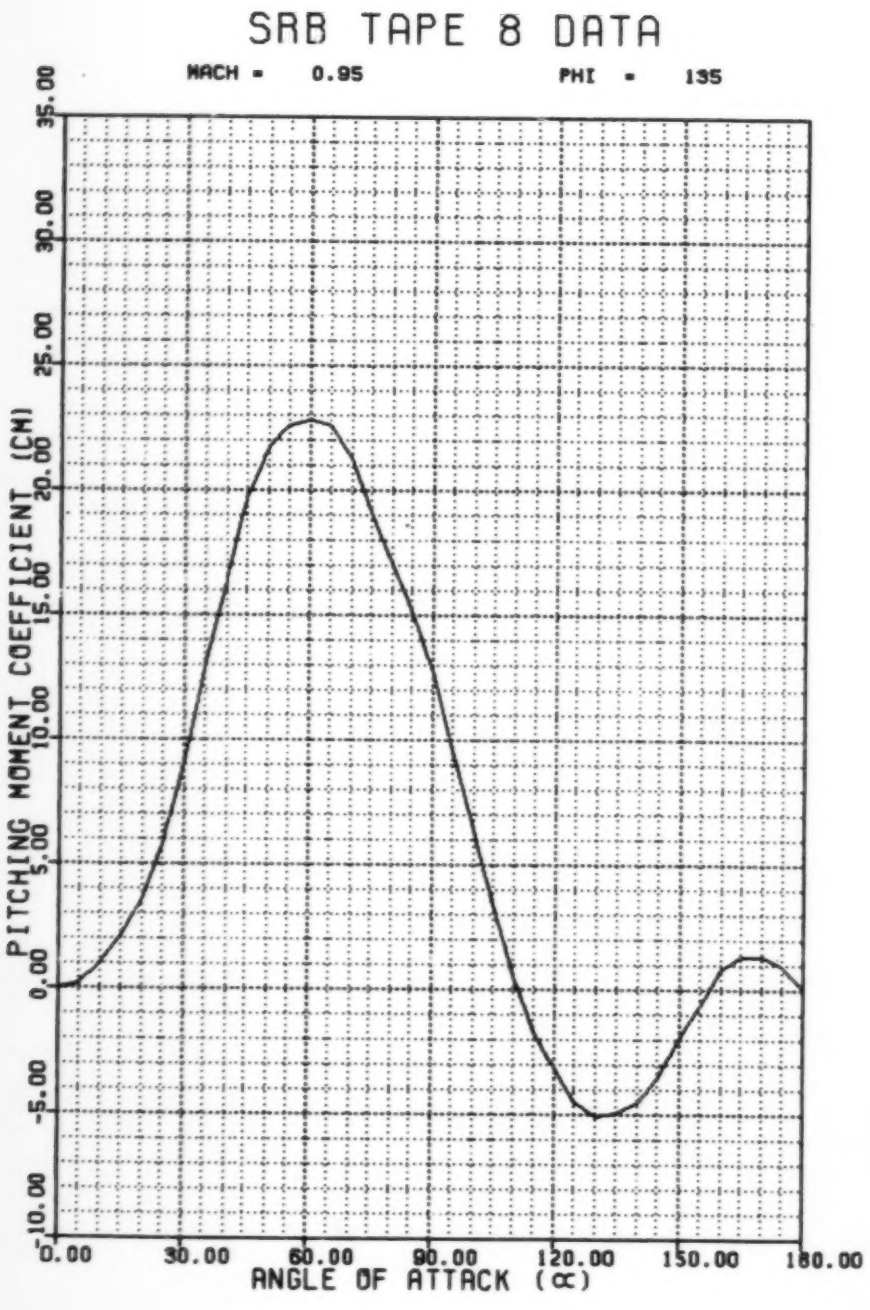
ANGLE OF ATTACK (α)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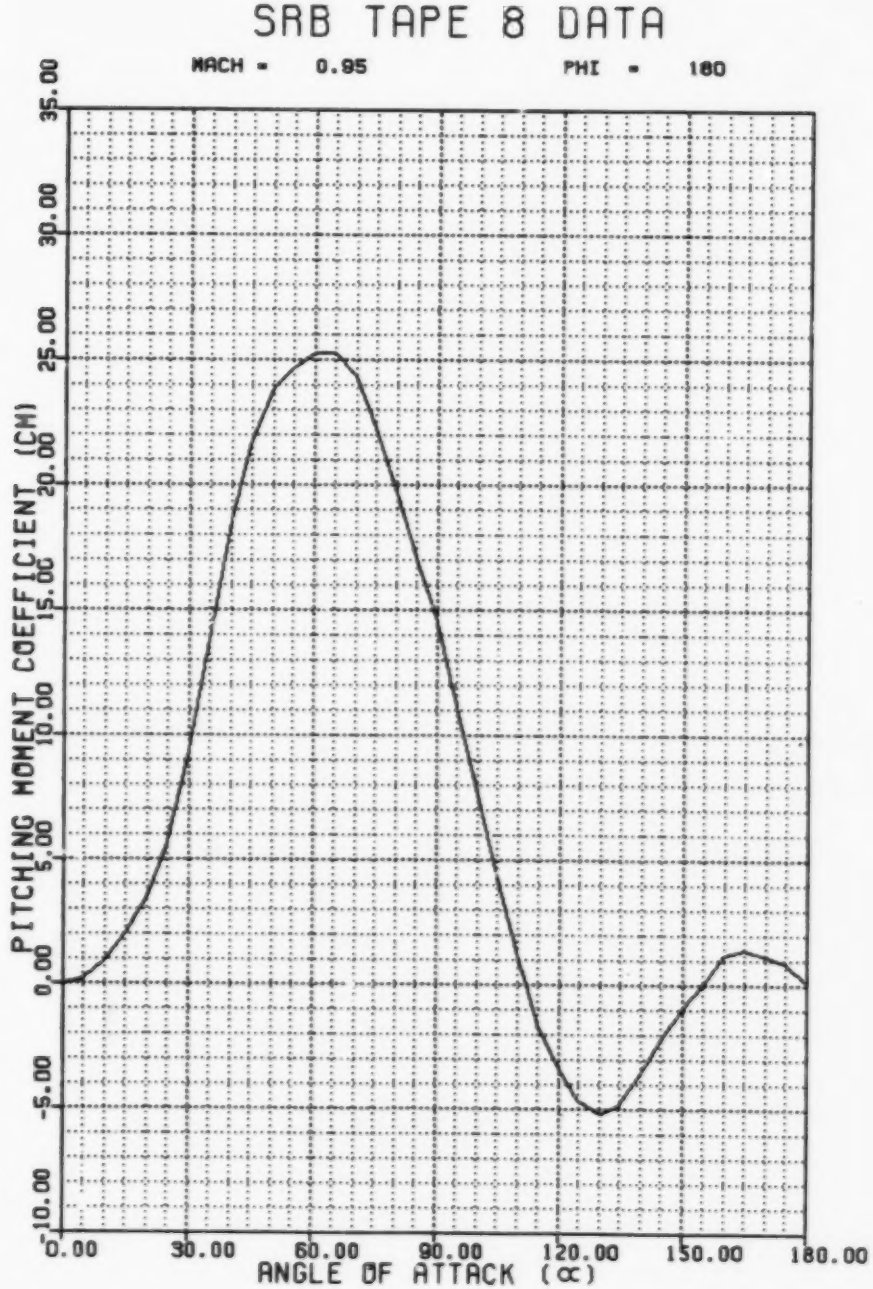
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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30.00
60.00
90.00
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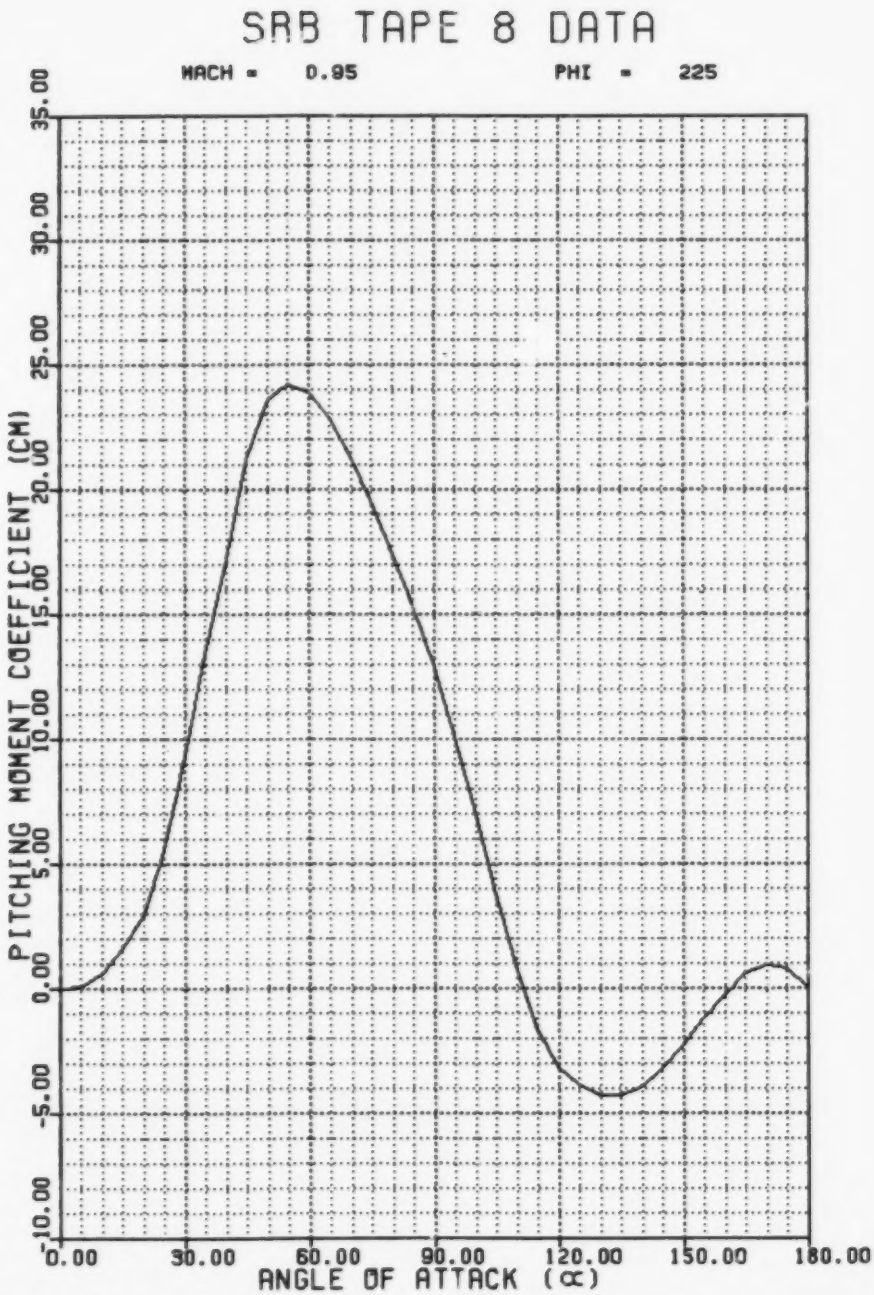
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
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120.00
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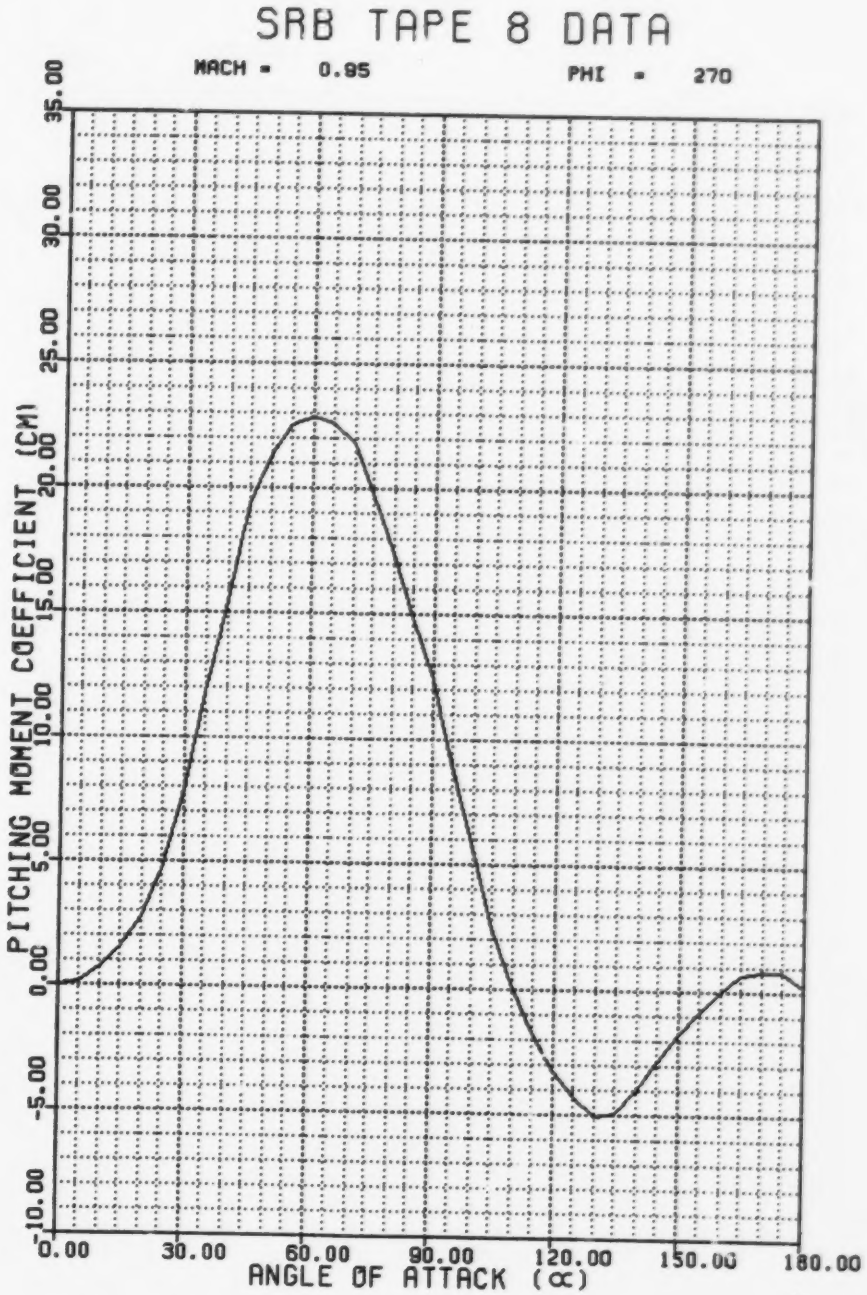
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.85
PHI = 270
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120.00
150.00
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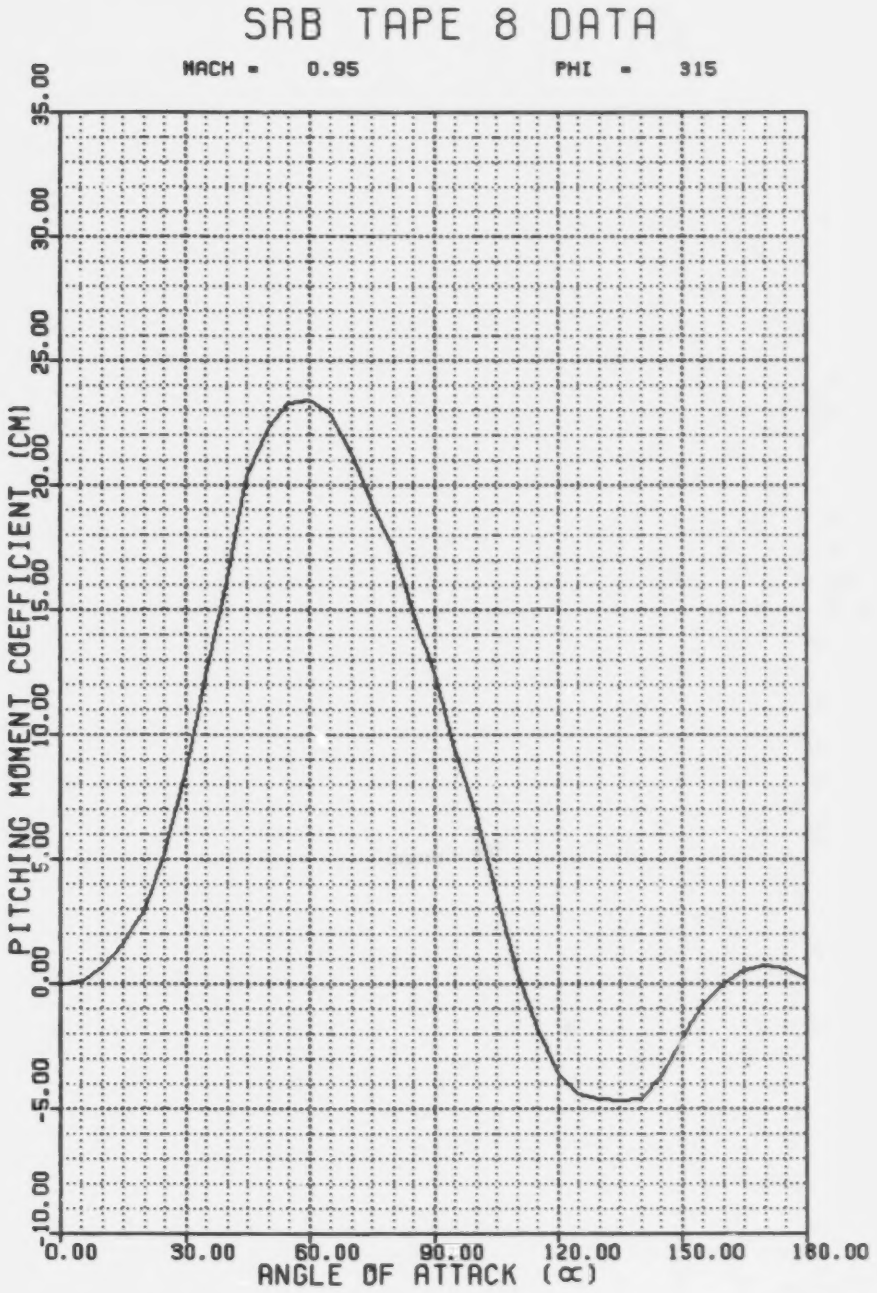
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
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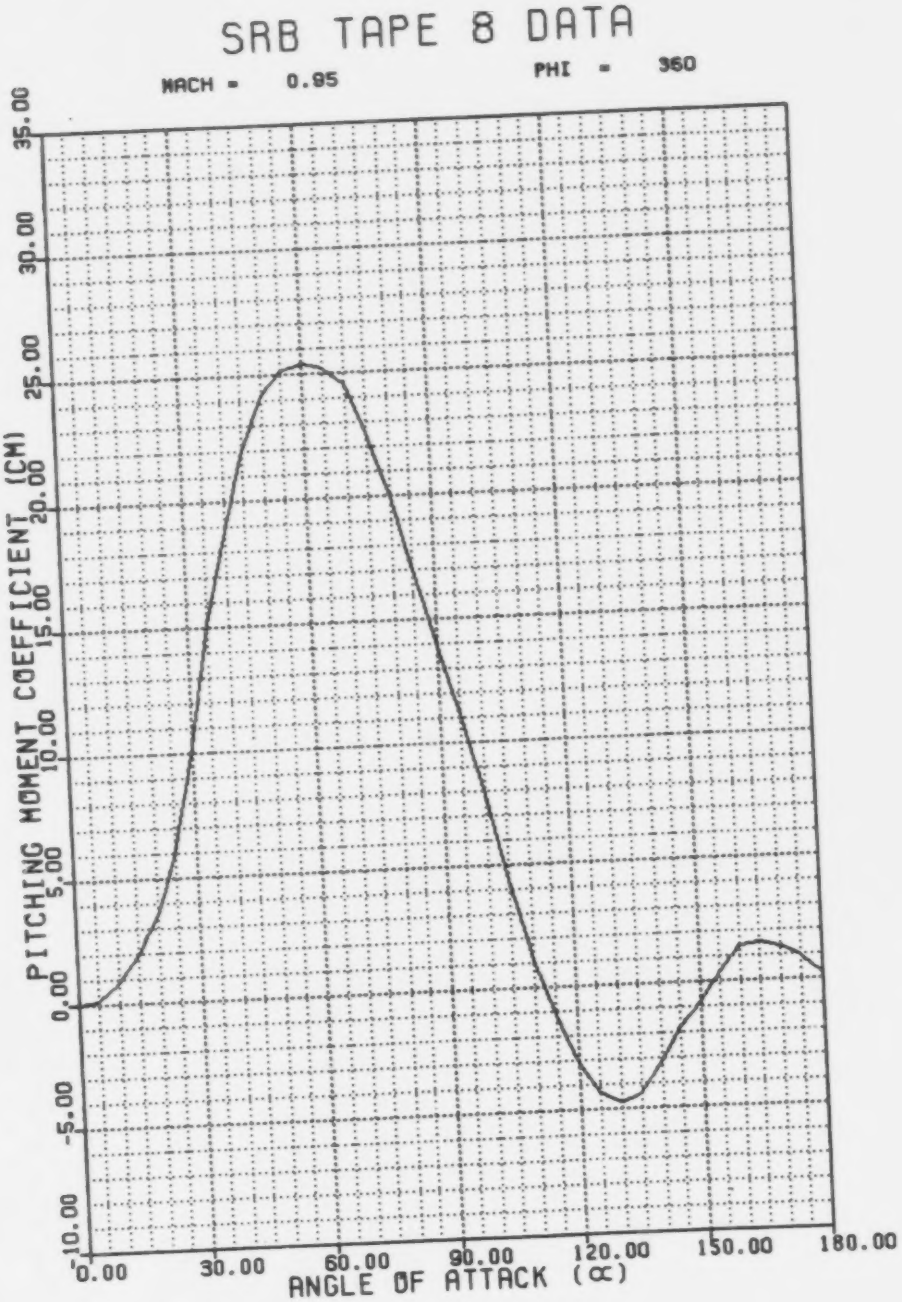
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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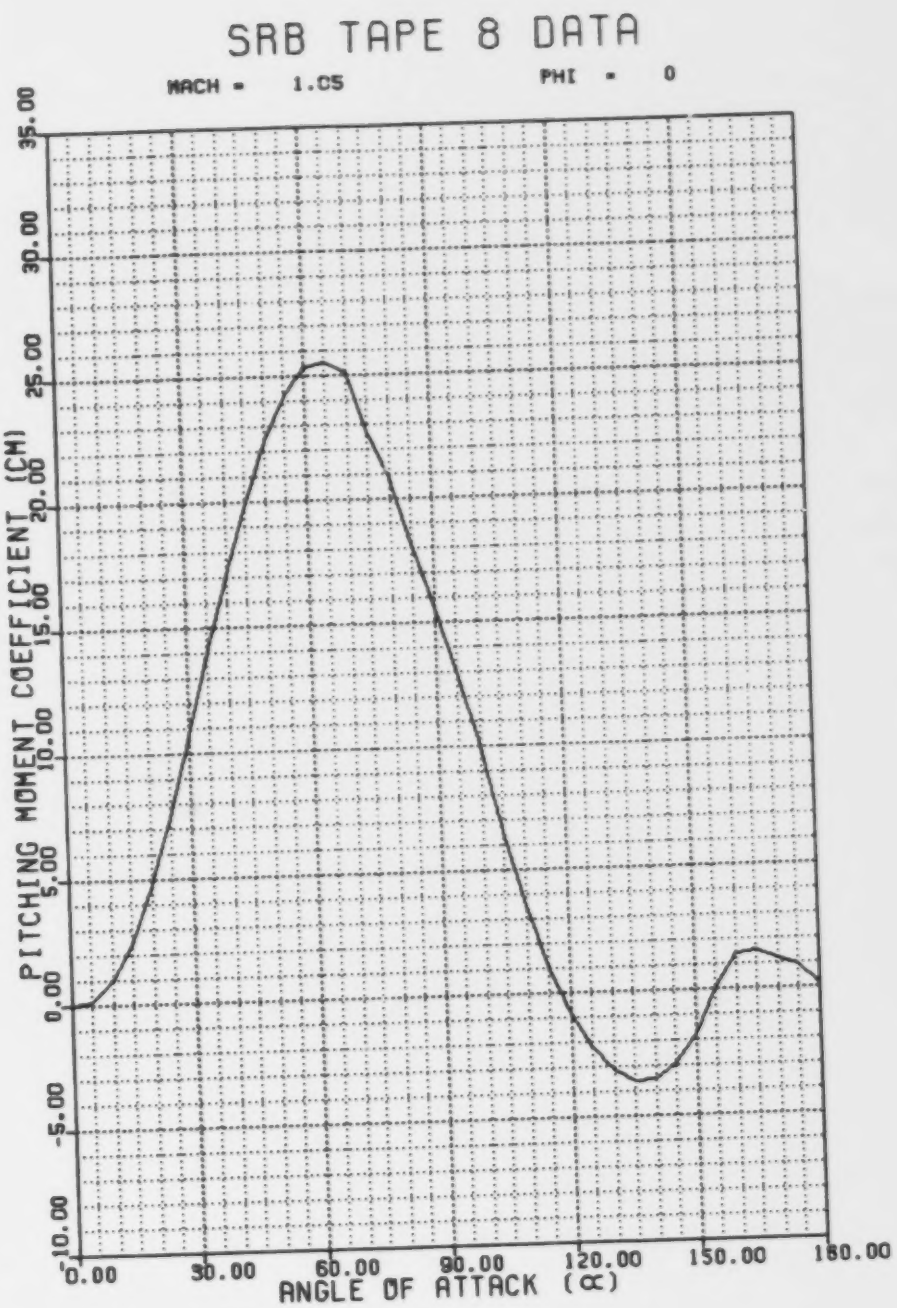
ANGLE OF ATTACK (α)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150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA
MACH = 1.05
PHI = 45
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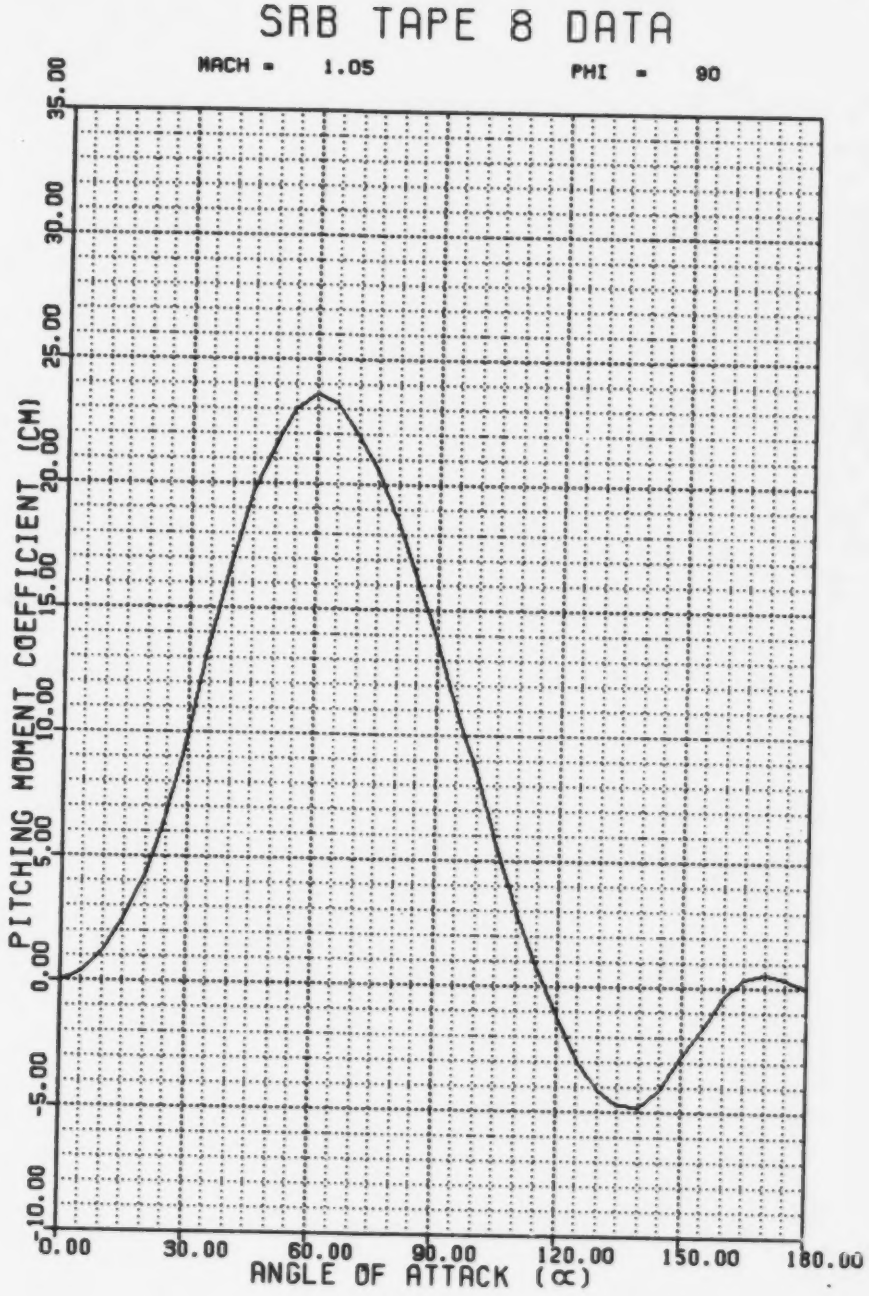
ANGLE OF ATTACK (α)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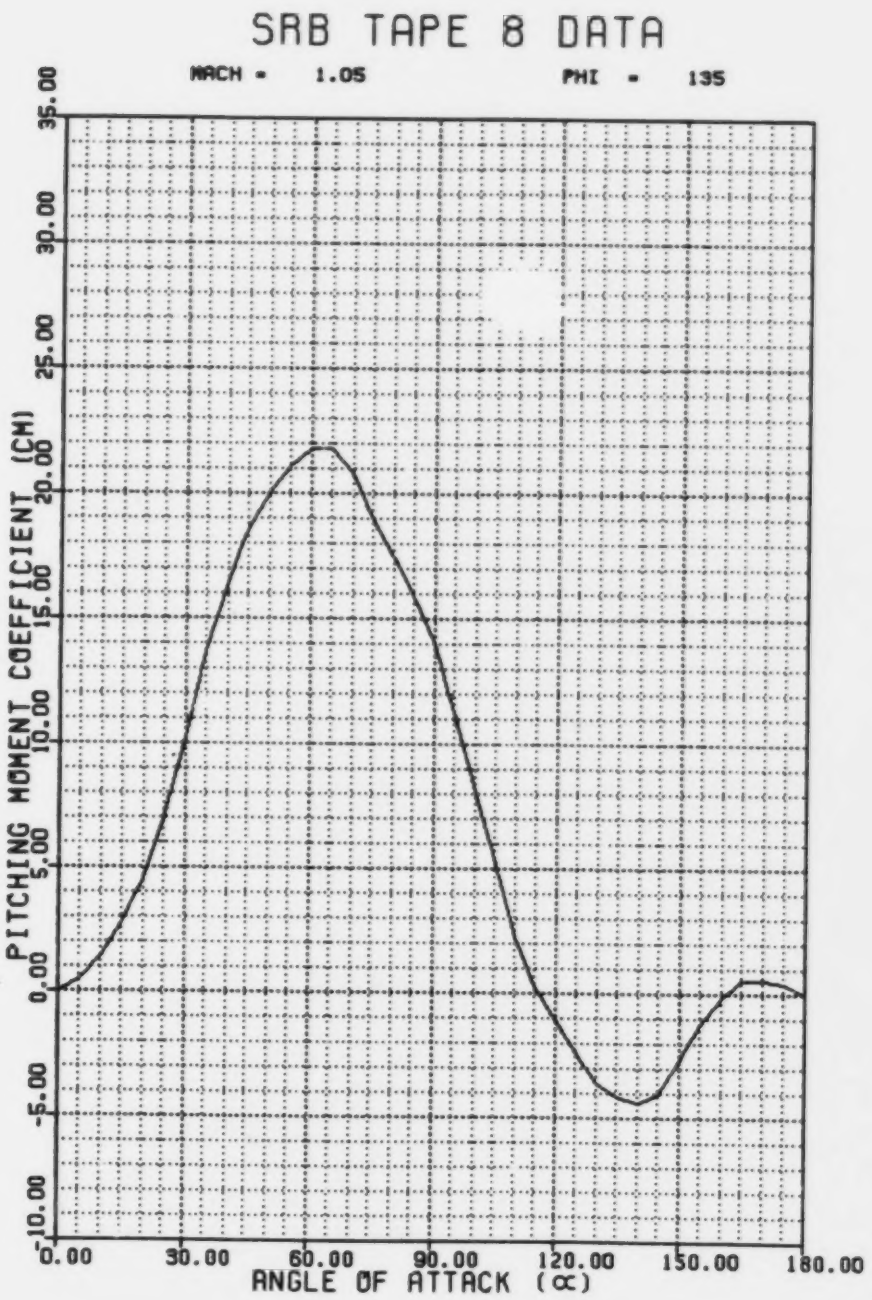
ANGLE OF ATTACK (α)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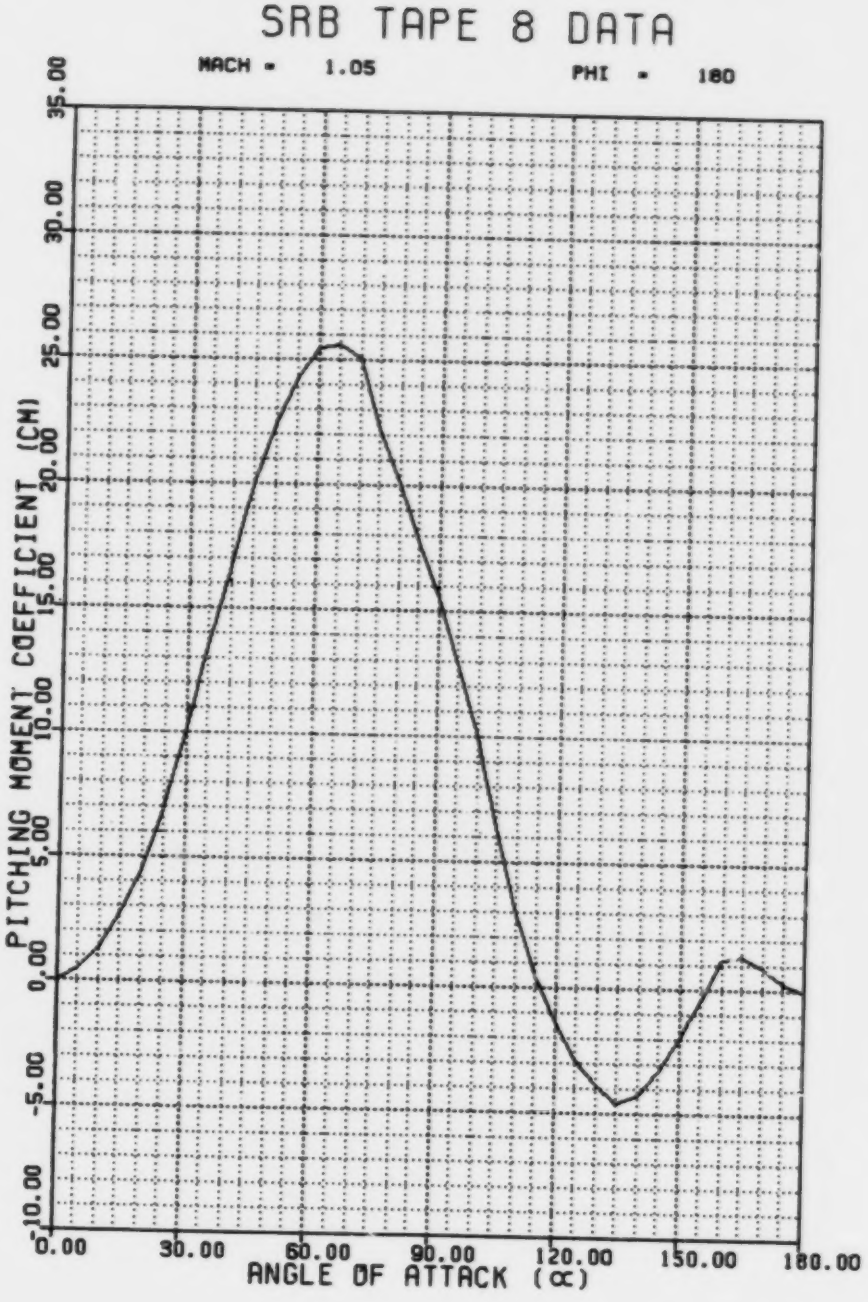
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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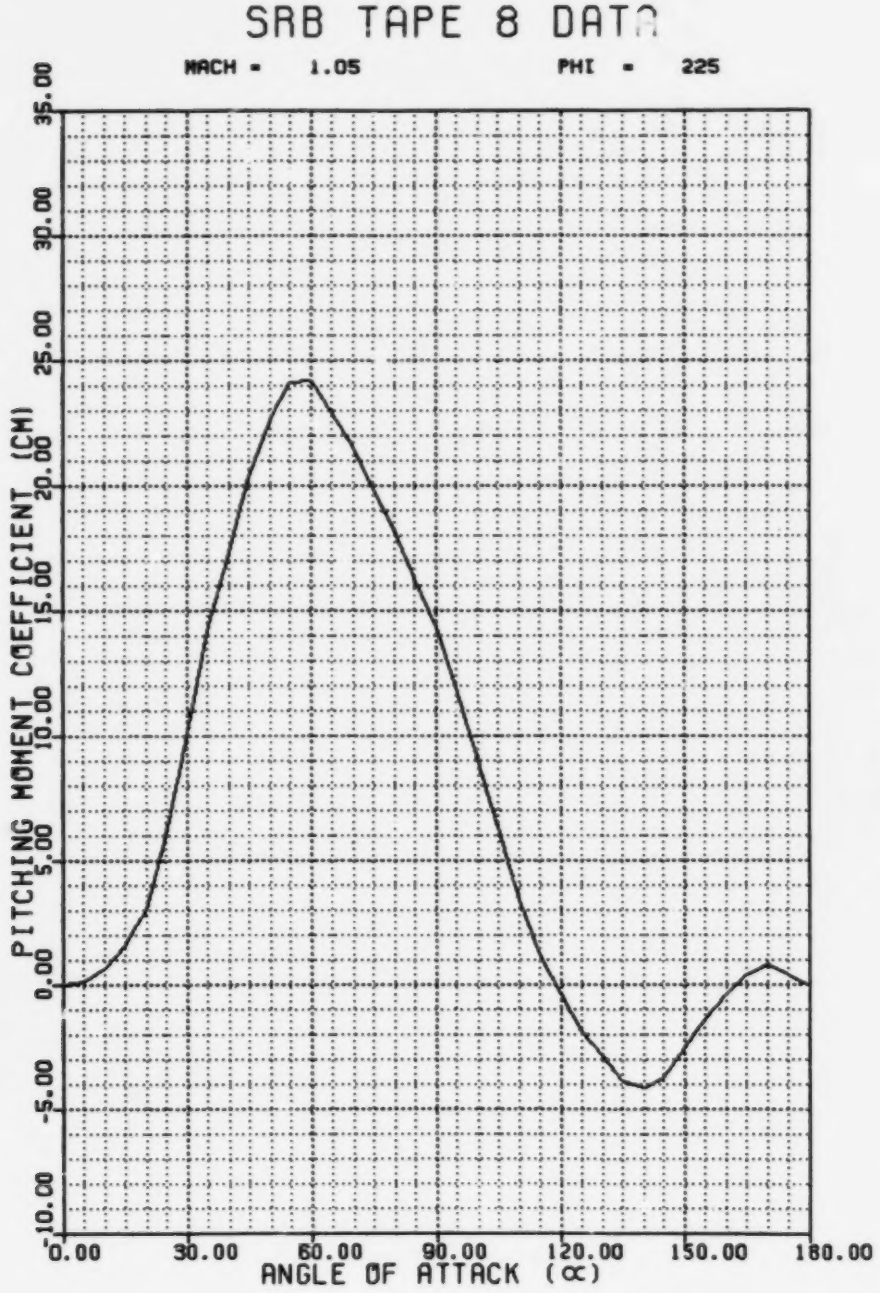
ANGLE OF ATTACK (α)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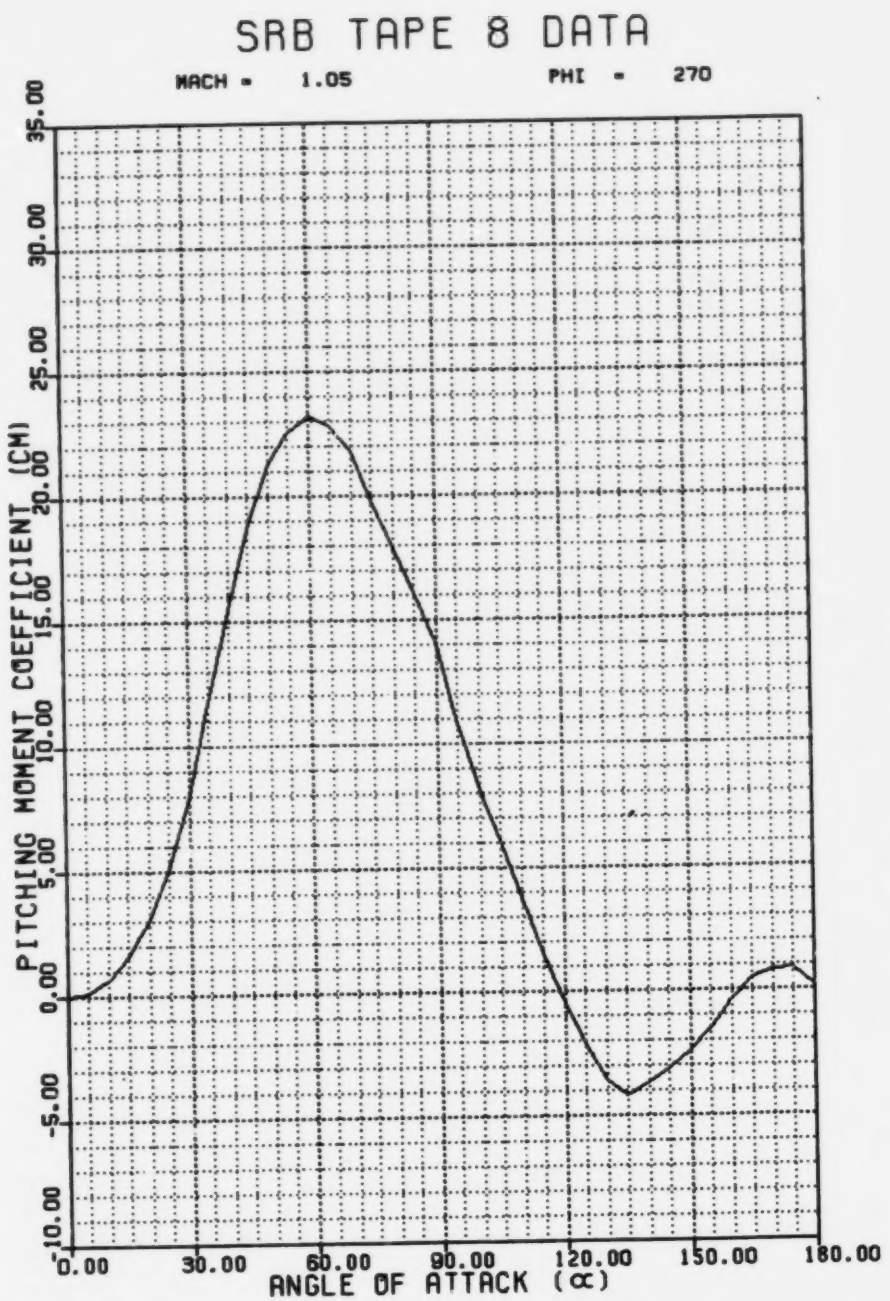
ANGLE OF ATTACK (α)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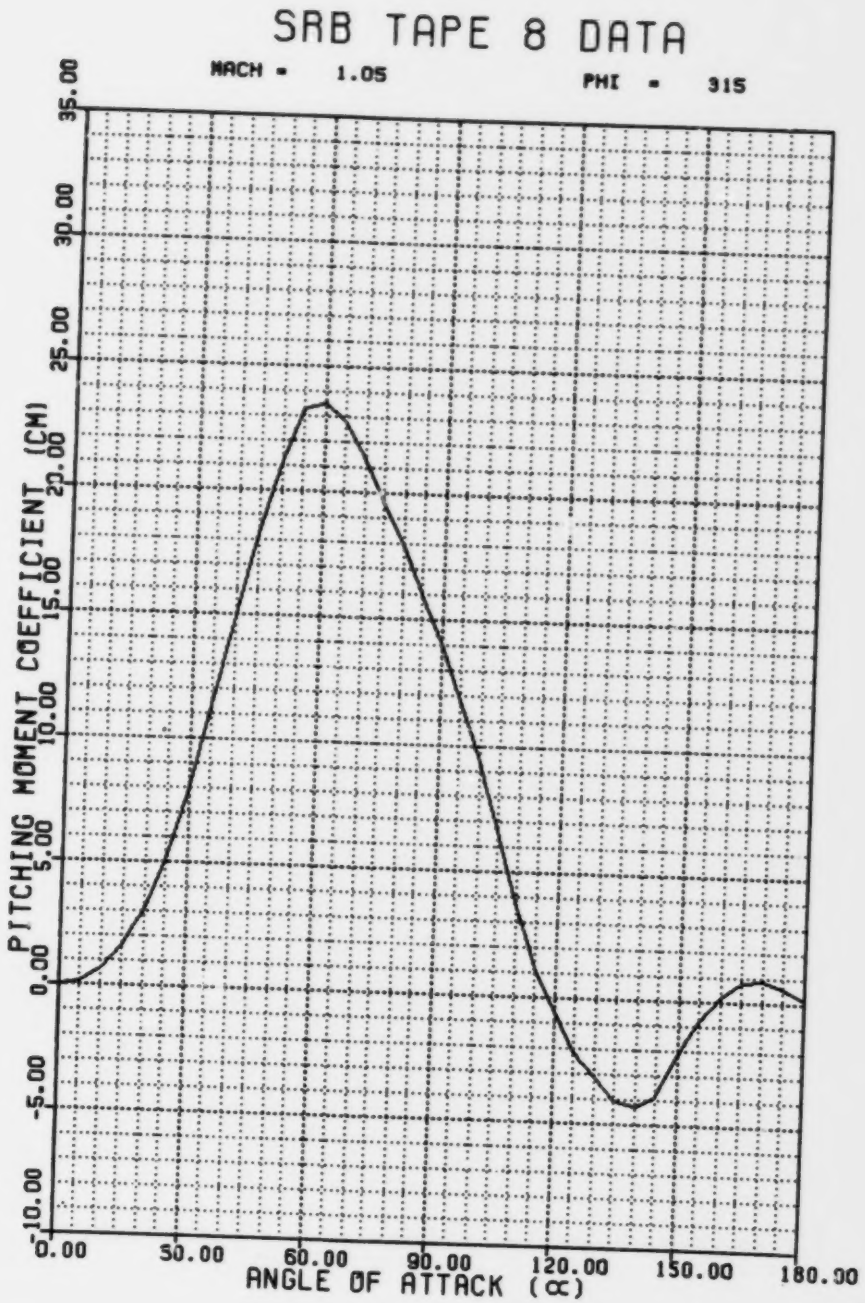
ANGLE OF ATTACK (α)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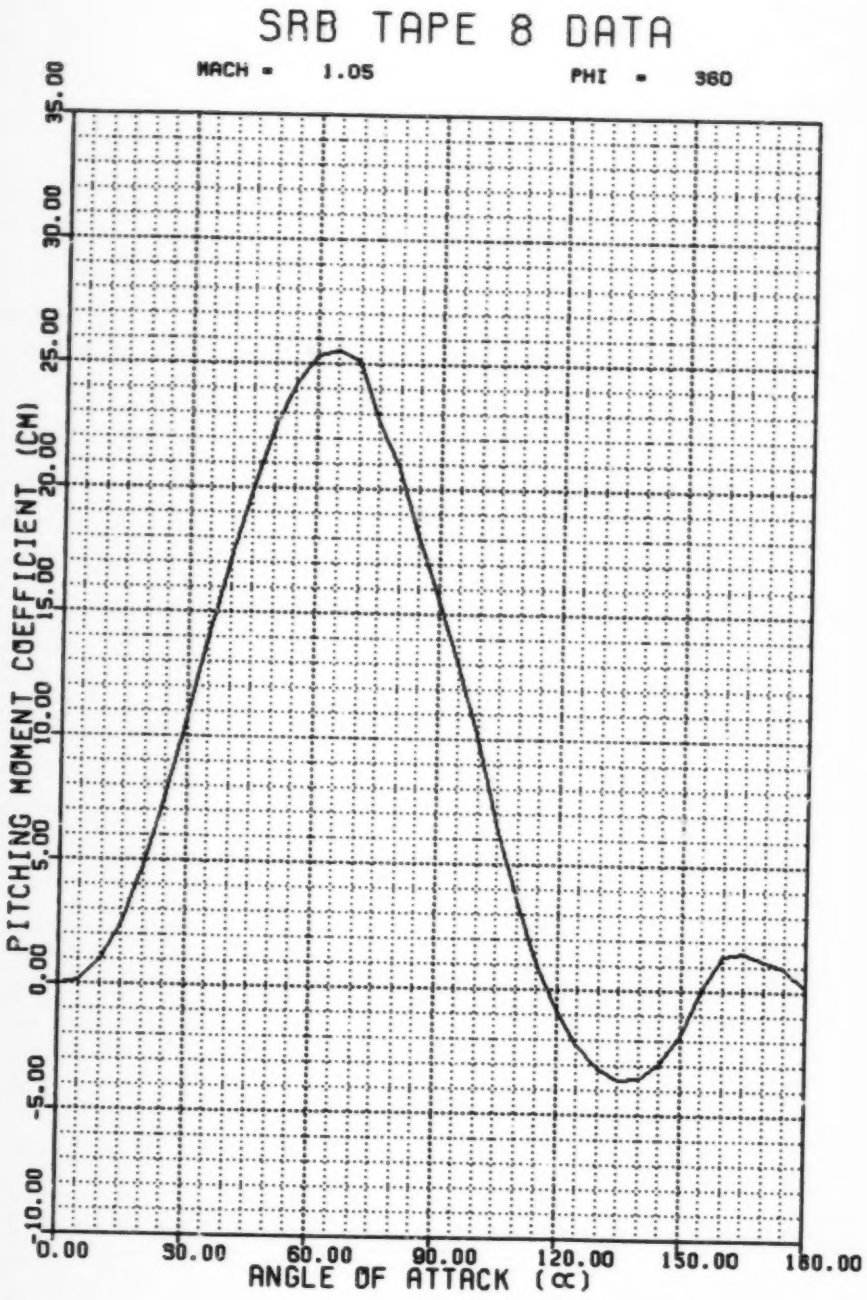
ANGLE OF ATTACK (α)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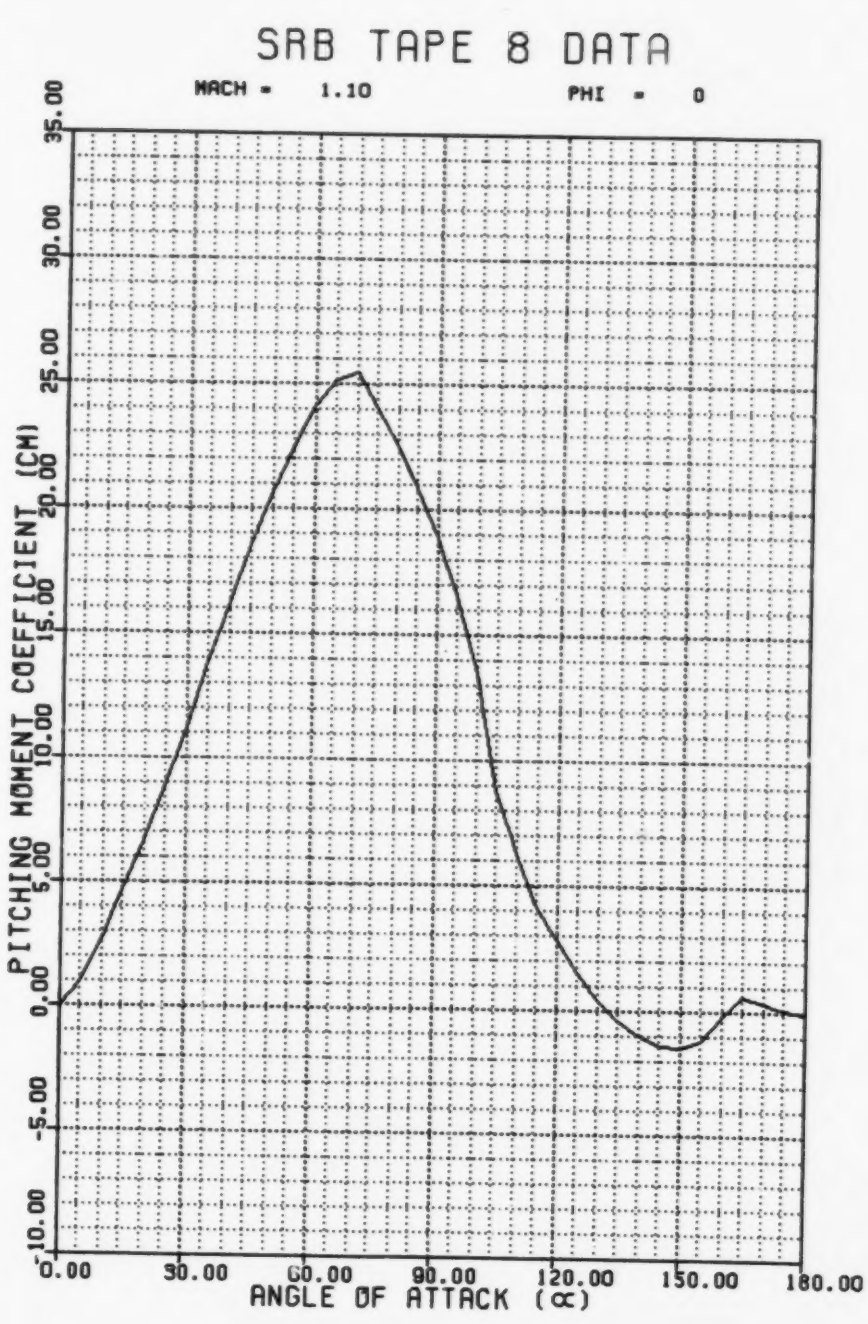
ANGLE OF ATTACK (α)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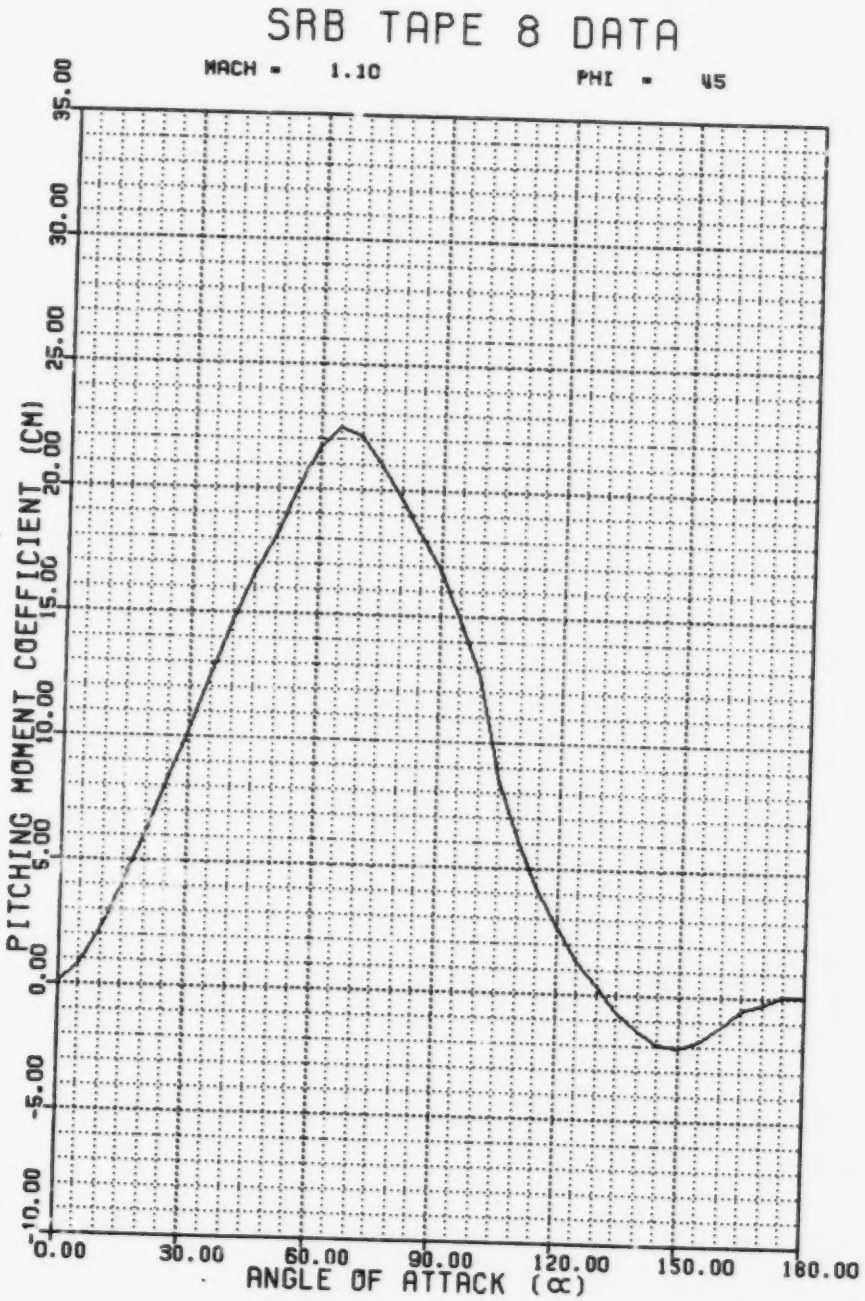
ANGLE OF ATTACK (α)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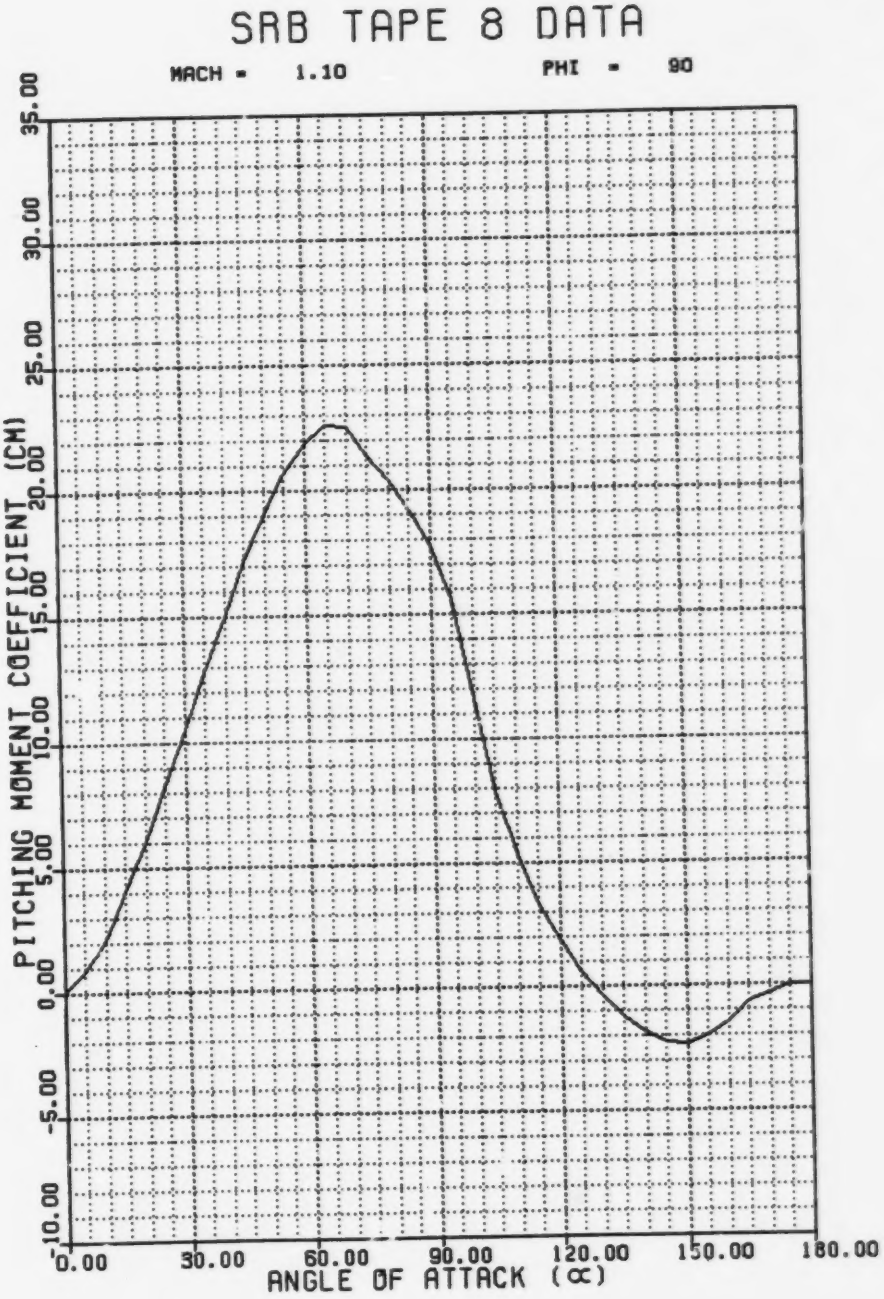
ANGLE OF ATTACK (α)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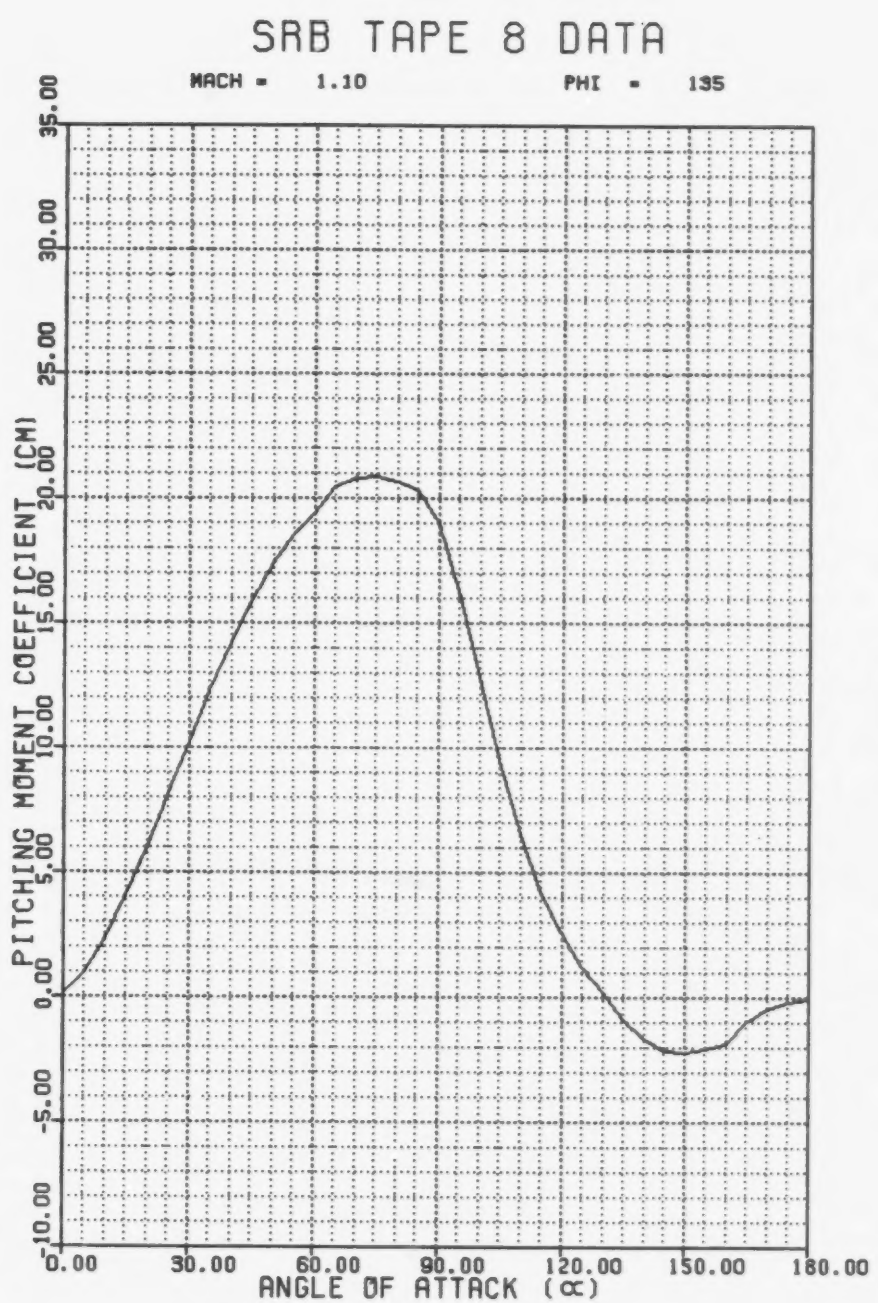
ANGLE OF ATTACK (α)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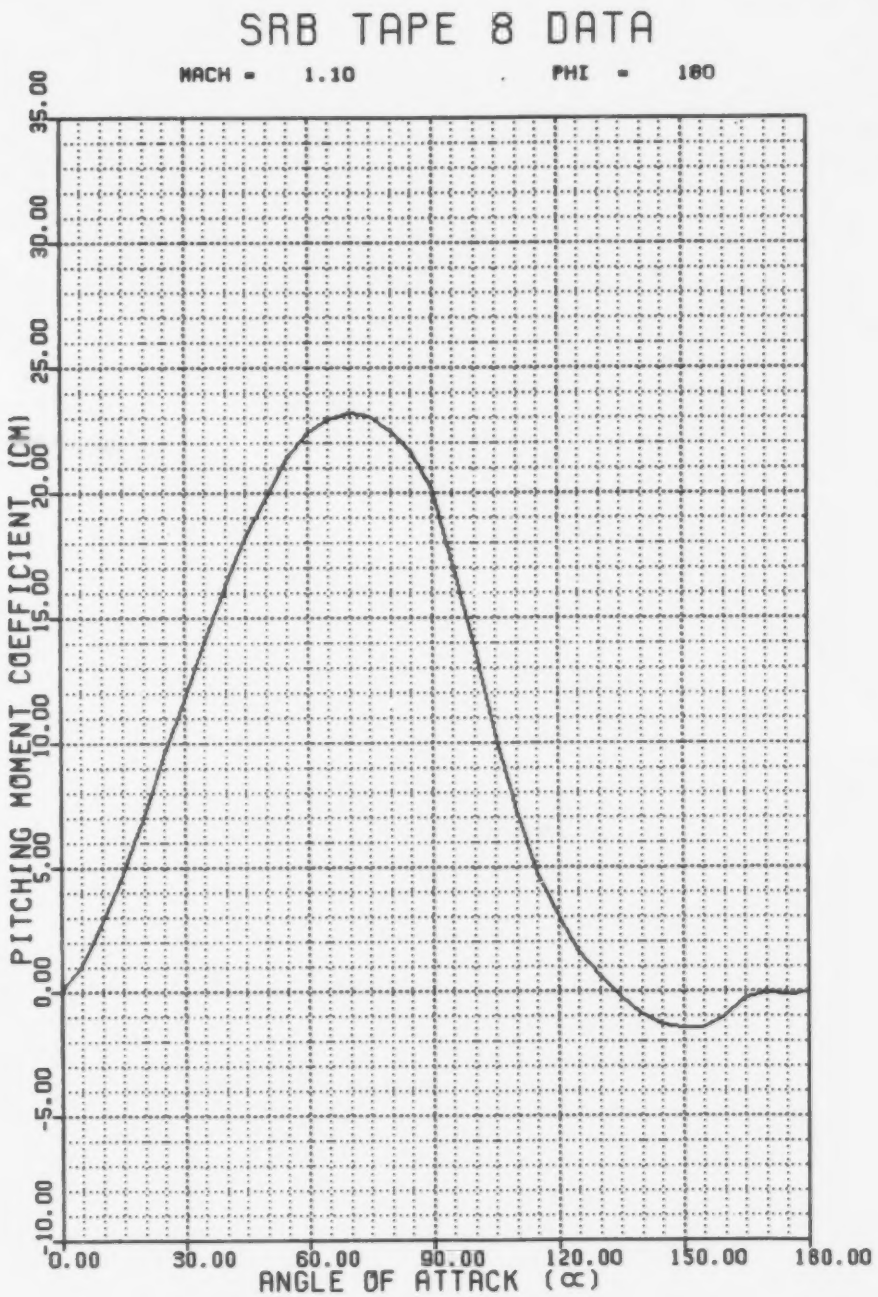
ANGLE OF ATTACK (α)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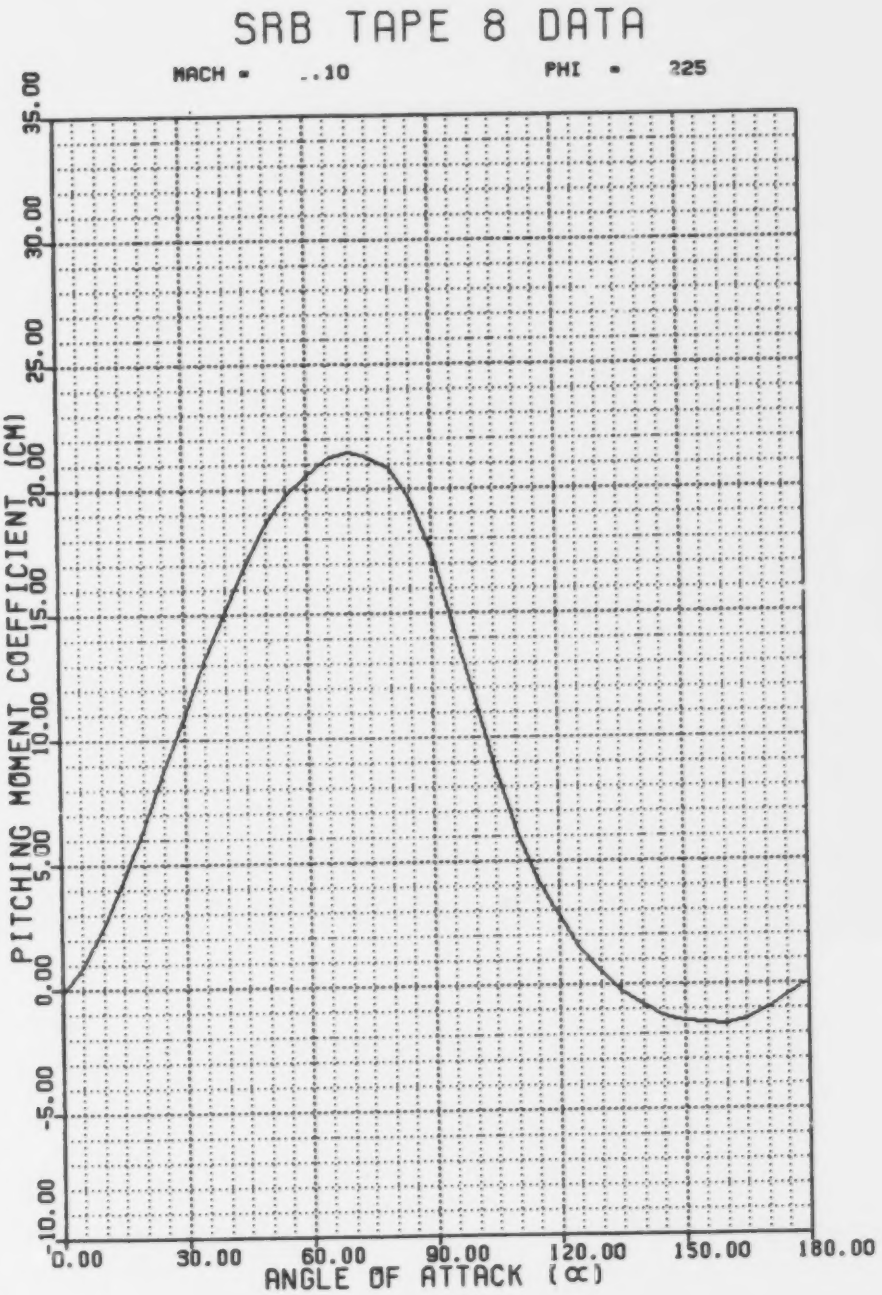
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = ..10
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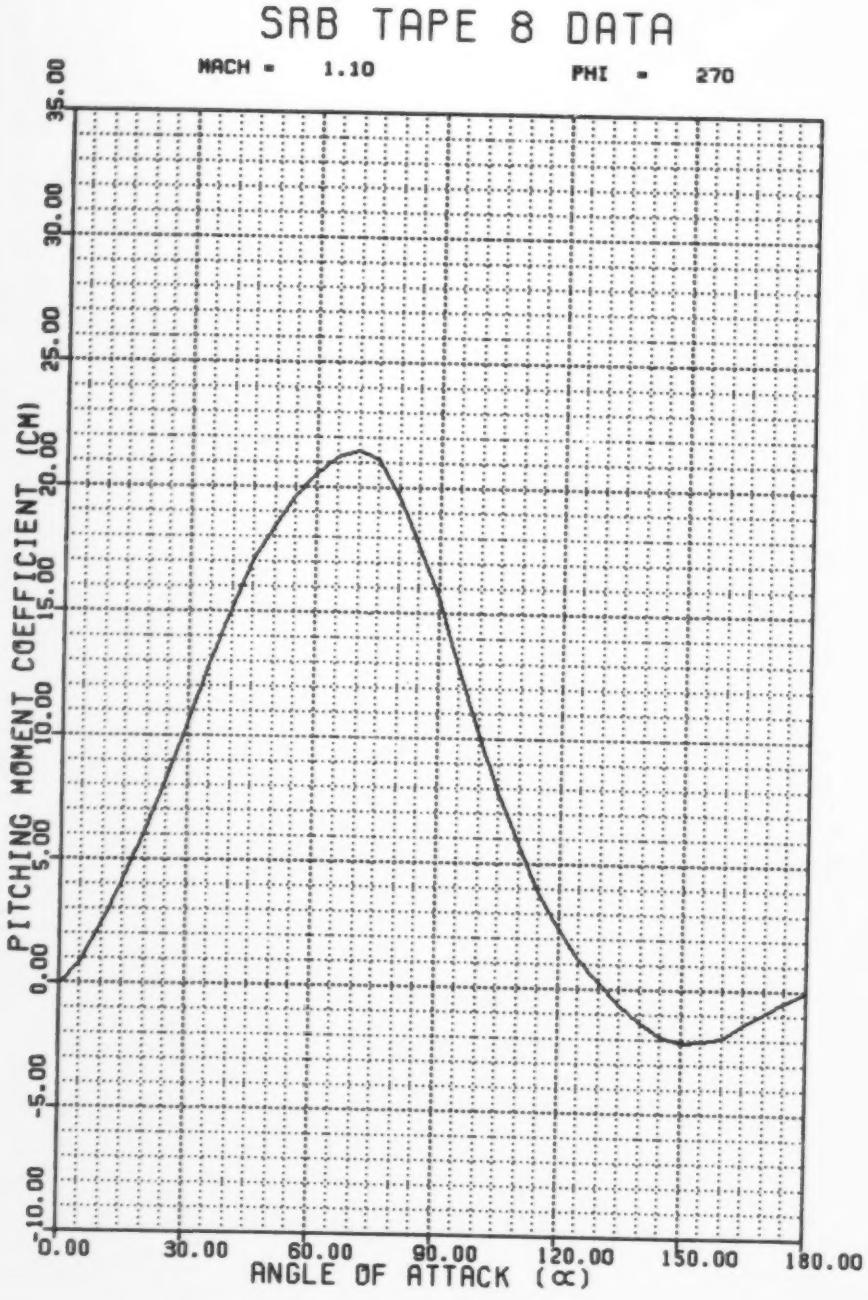
ANGLE OF ATTACK (α)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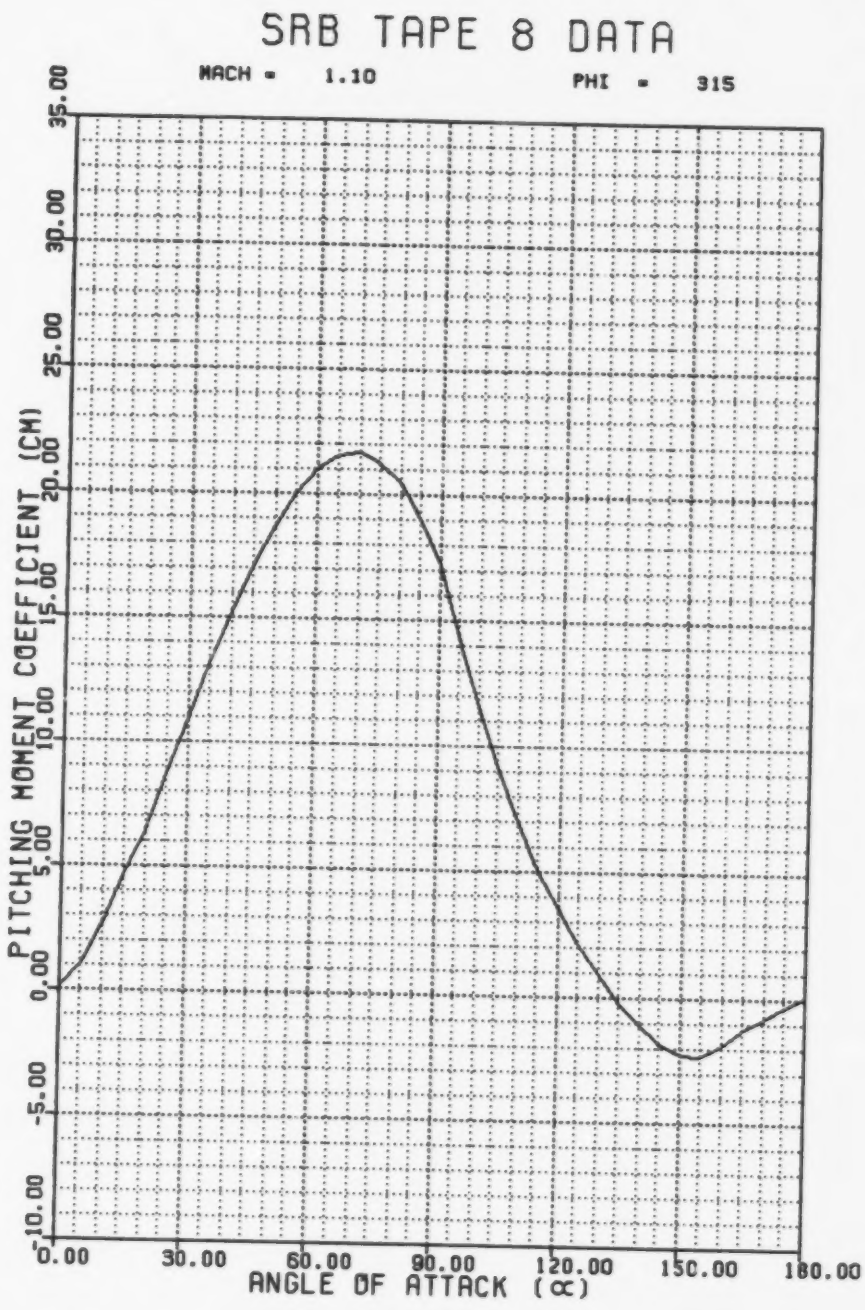
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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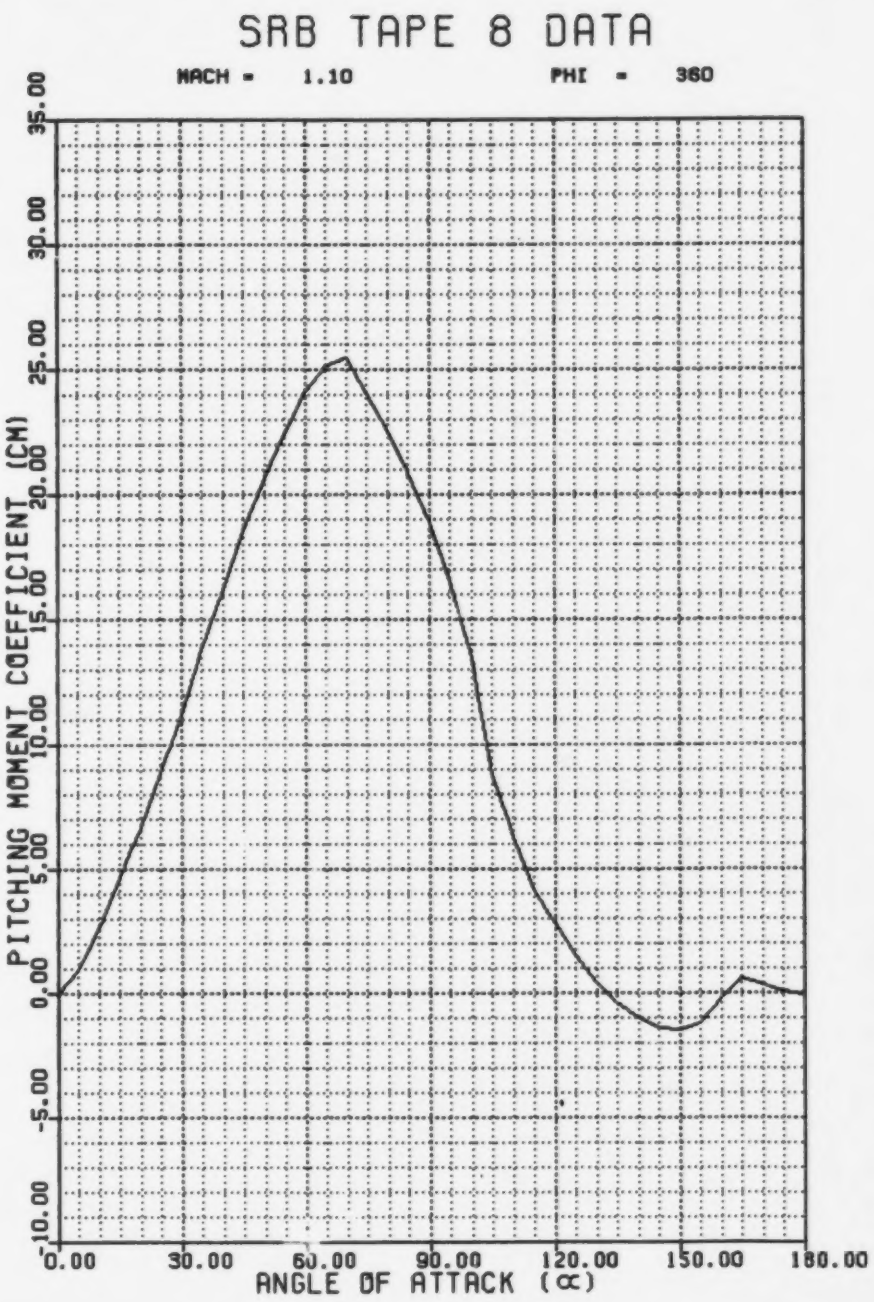
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 360
PITCHING MOMENT COEFFICIENT (CM)
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10.00
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60.00
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120.00
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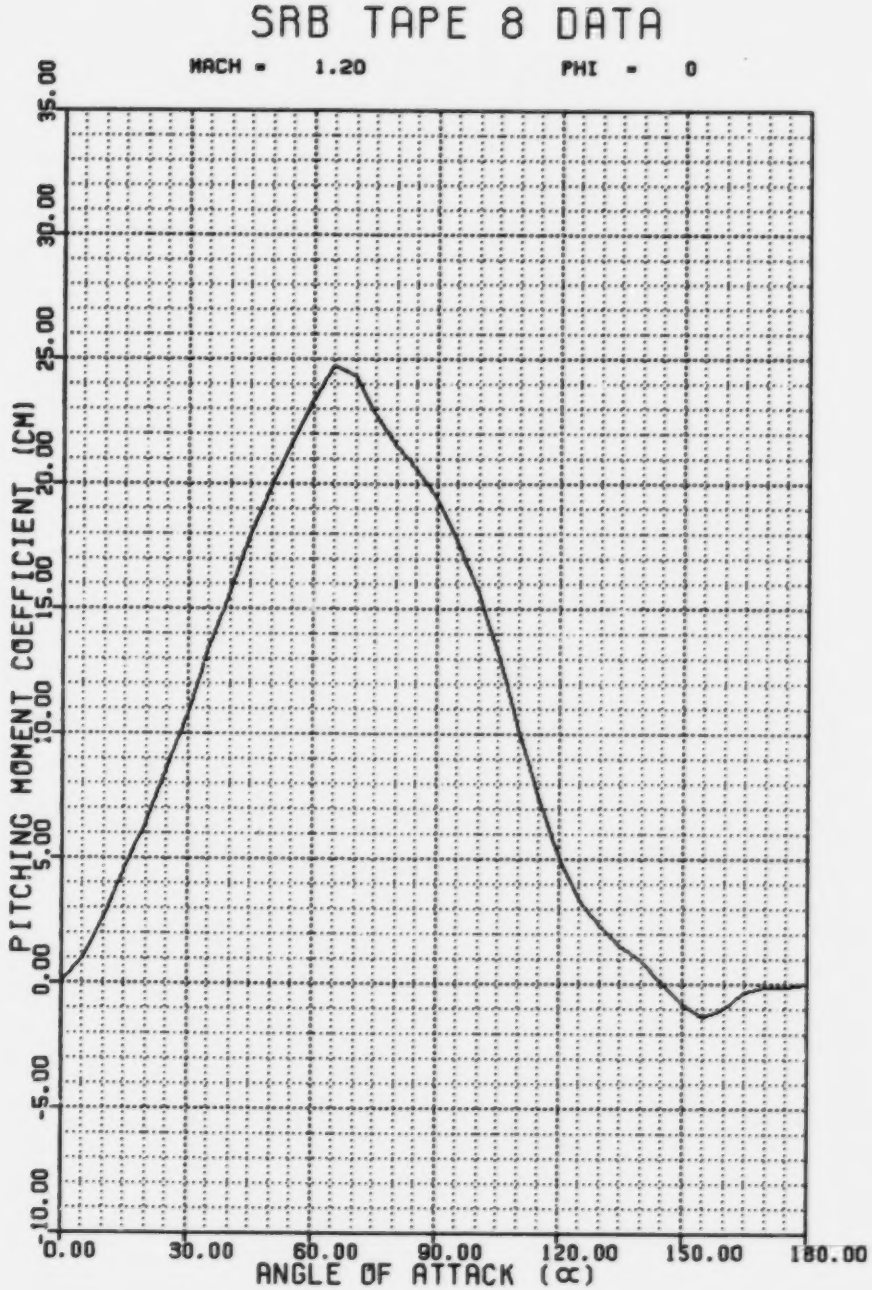
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 0
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60.00
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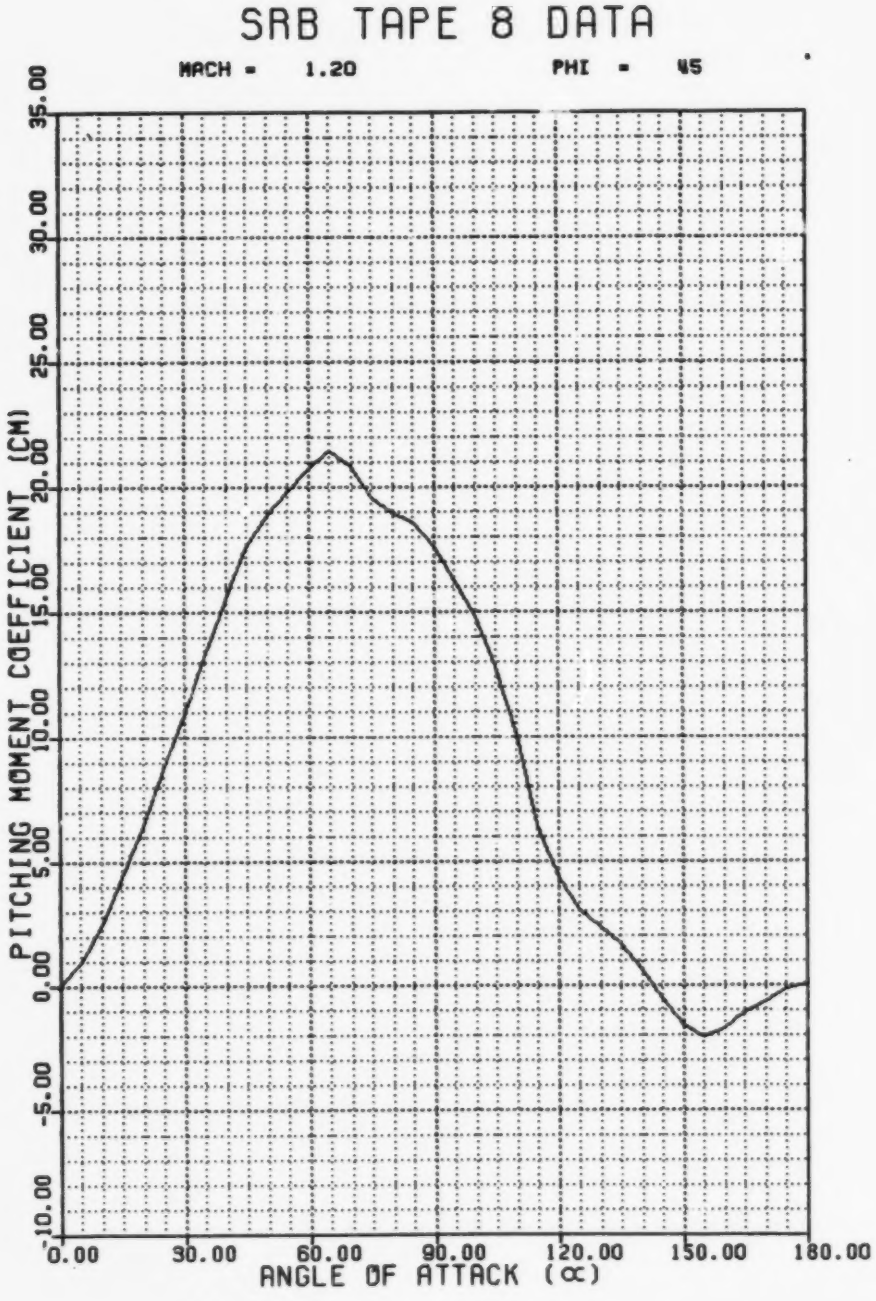
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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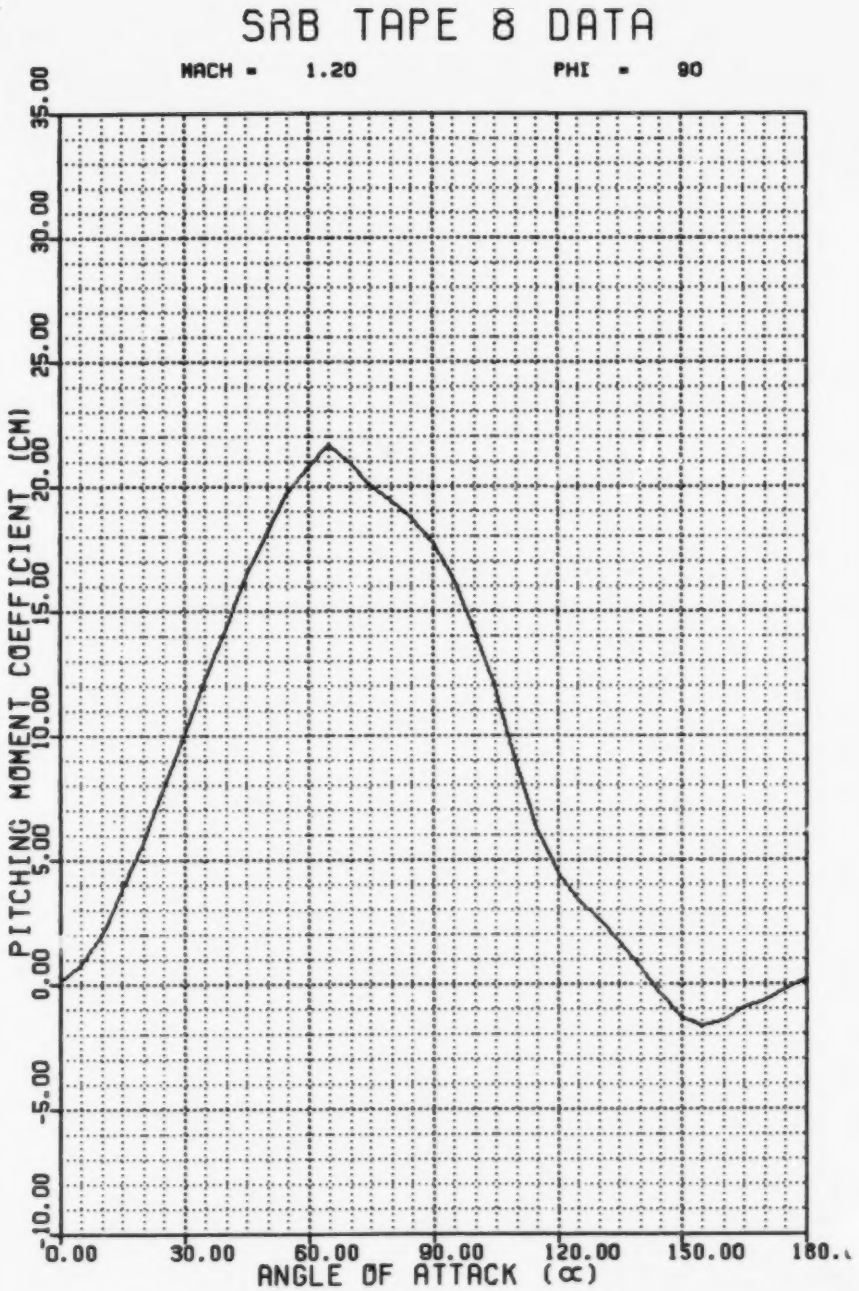
ANGLE OF ATTACK (α)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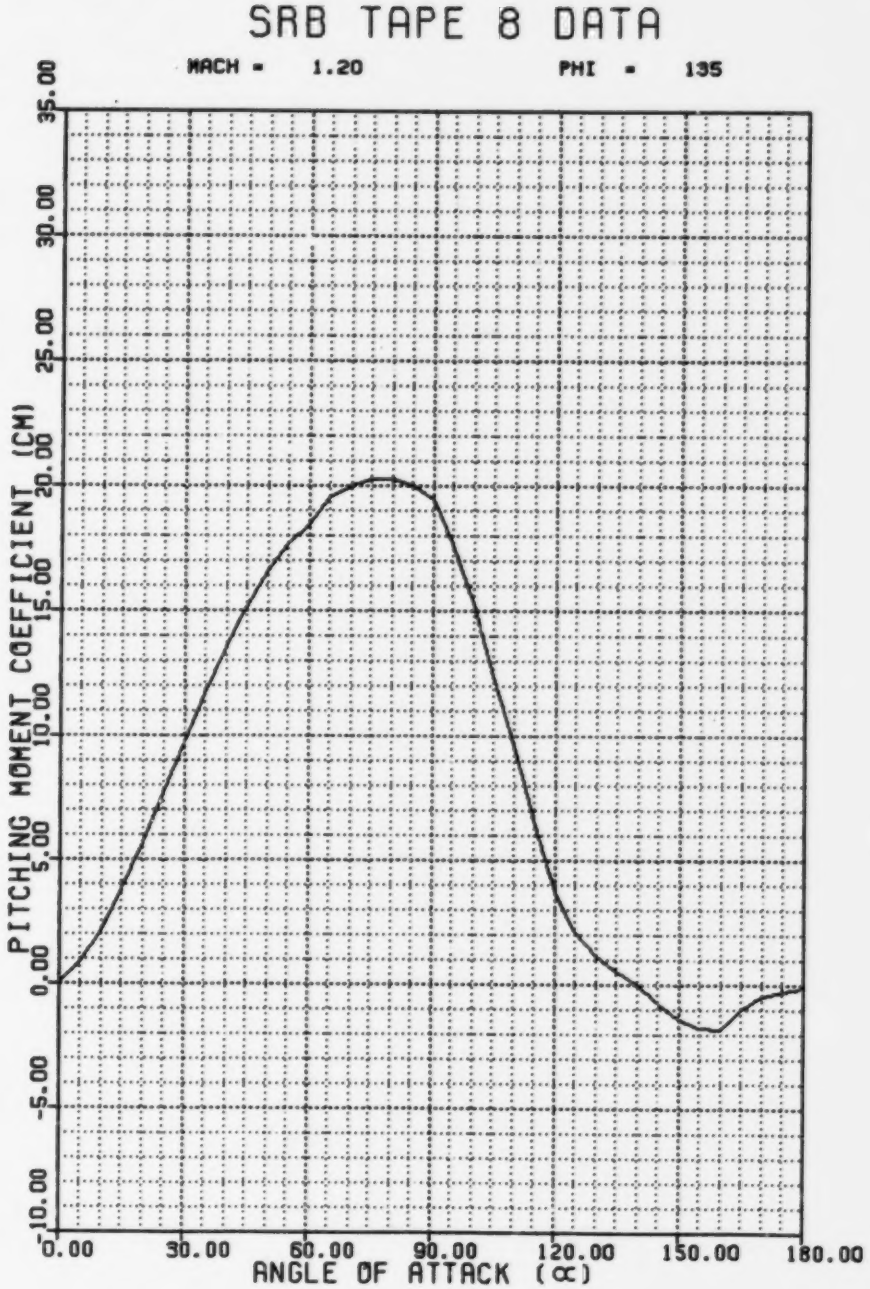
120.00
150.00
180.
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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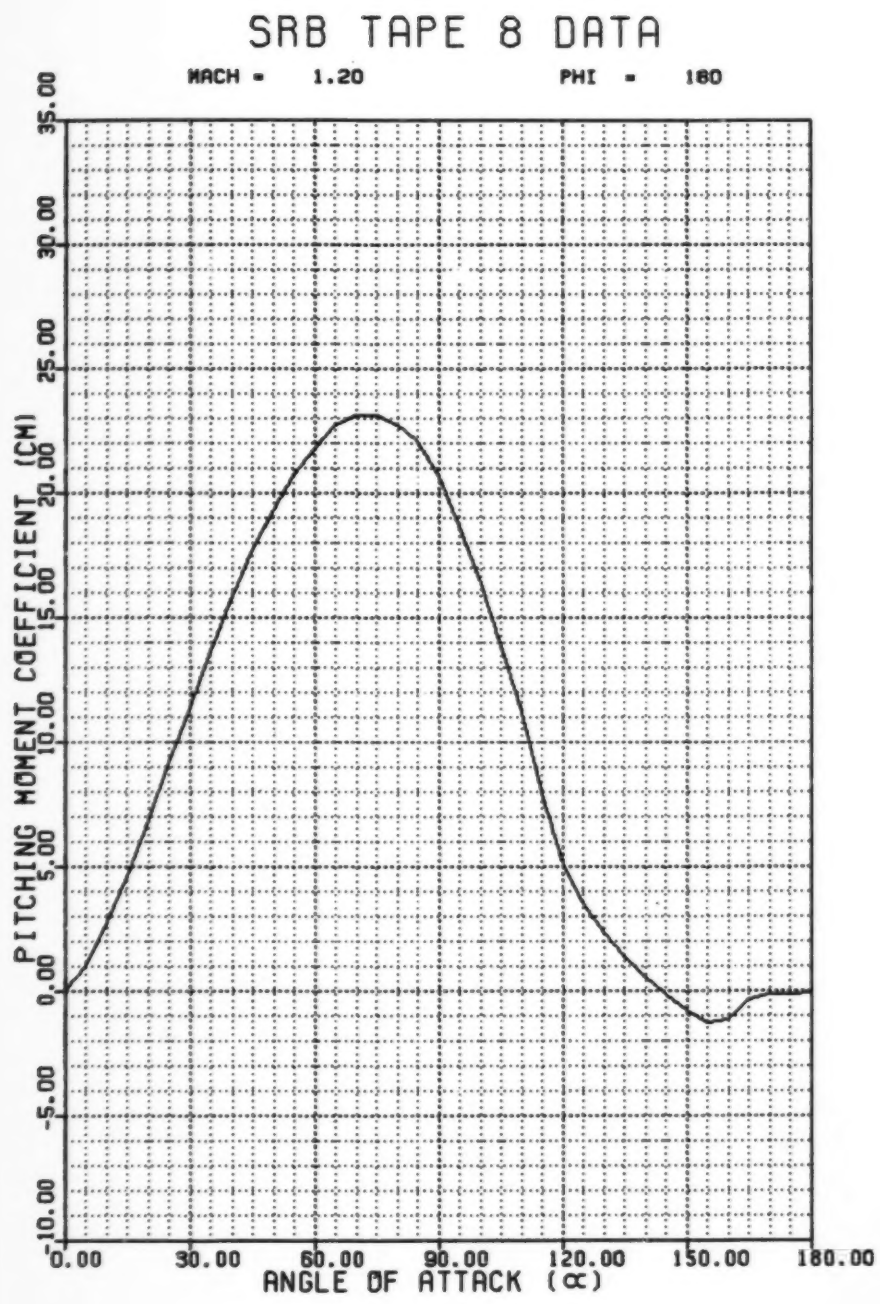
ANGLE OF ATTACK (α)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MACH = 1.20
PHI = 180
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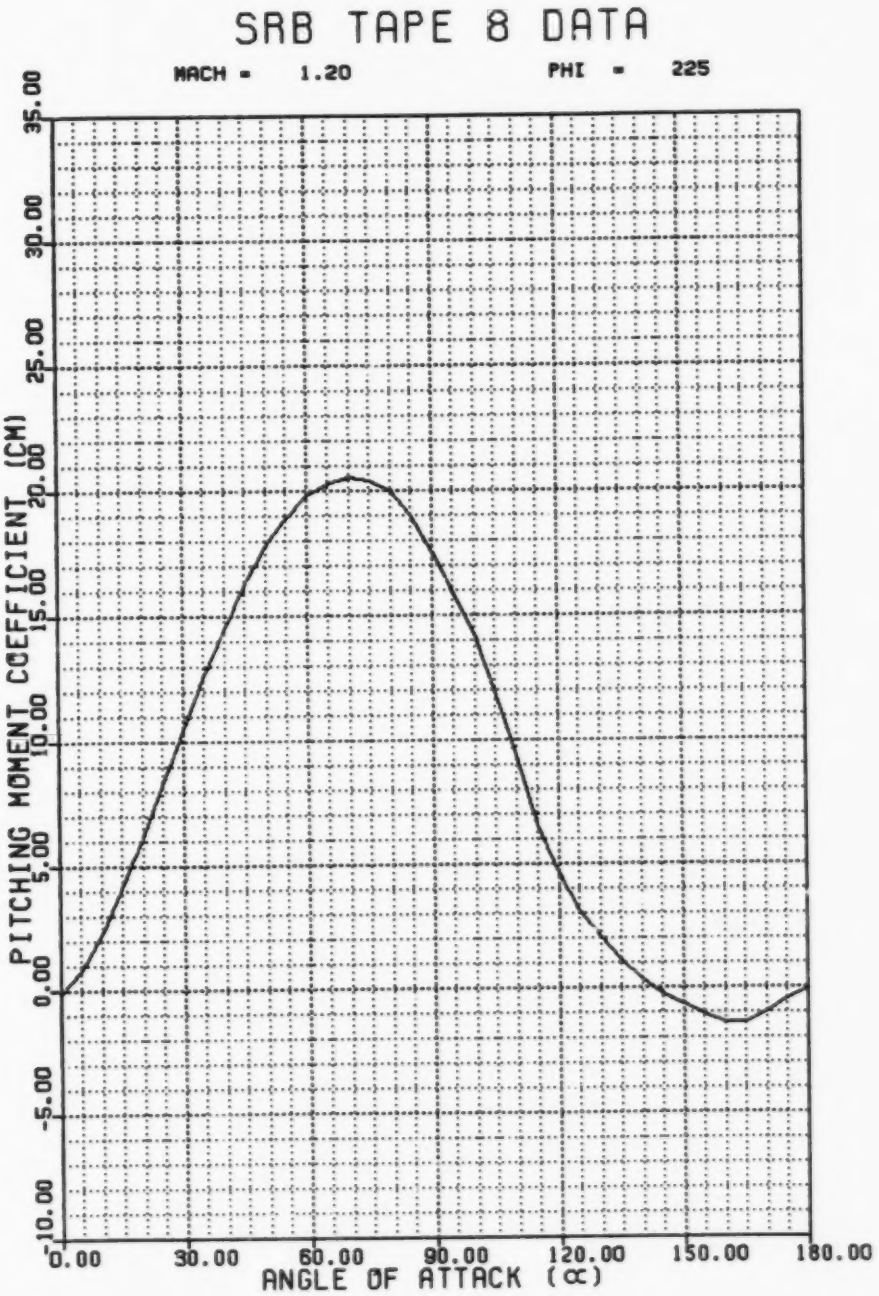
ANGLE OF ATTACK (α)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PHI = 225
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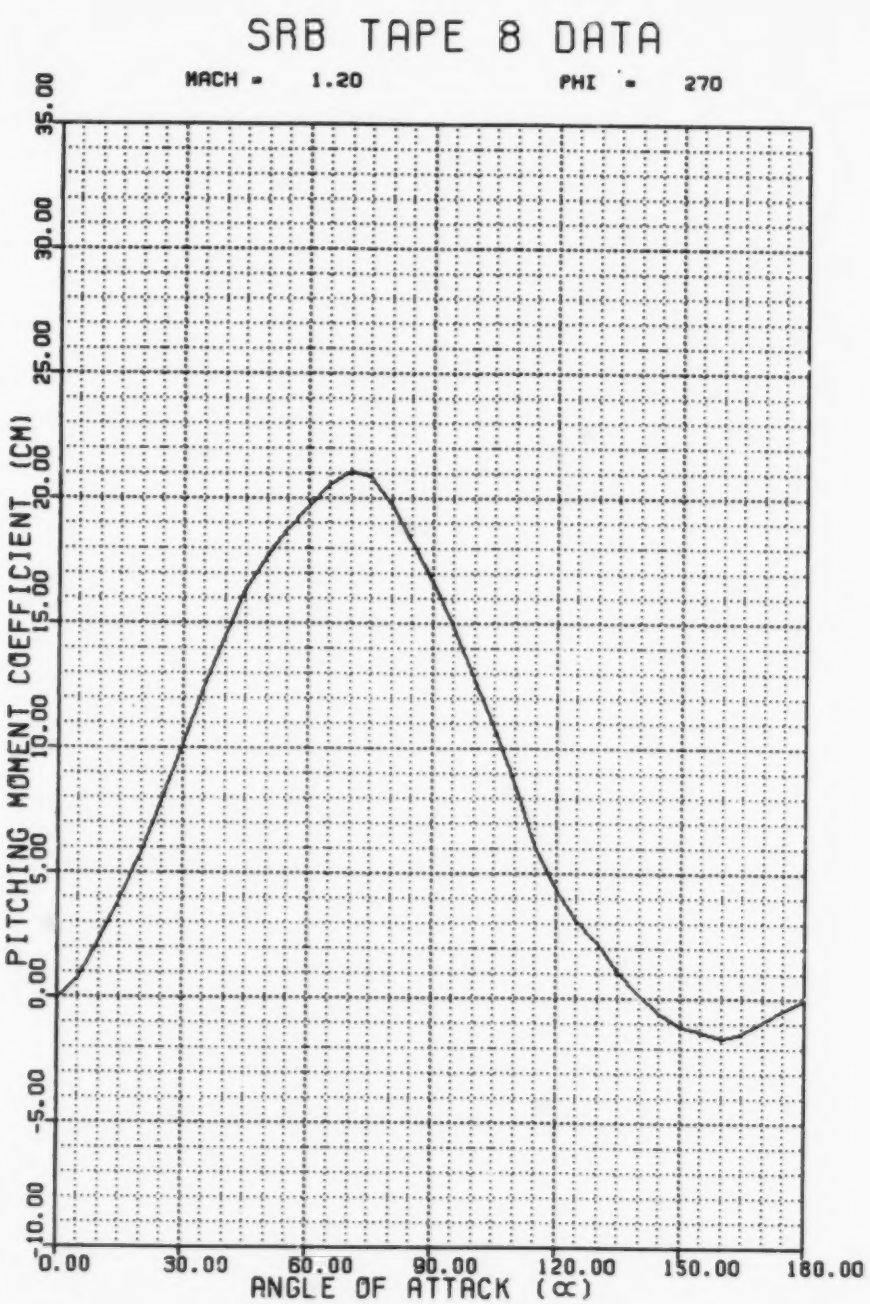
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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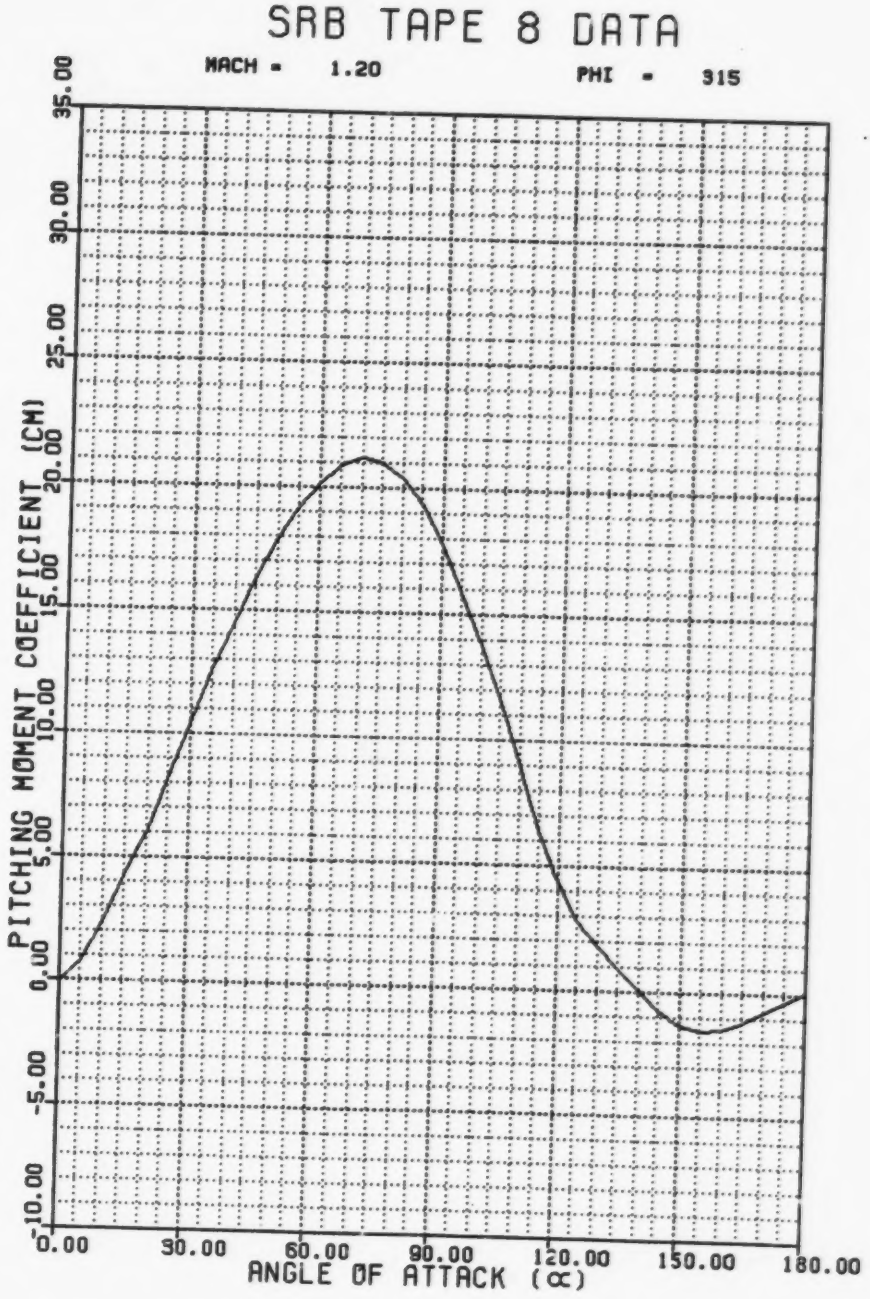
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 315
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10.00
5.00
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-5.00
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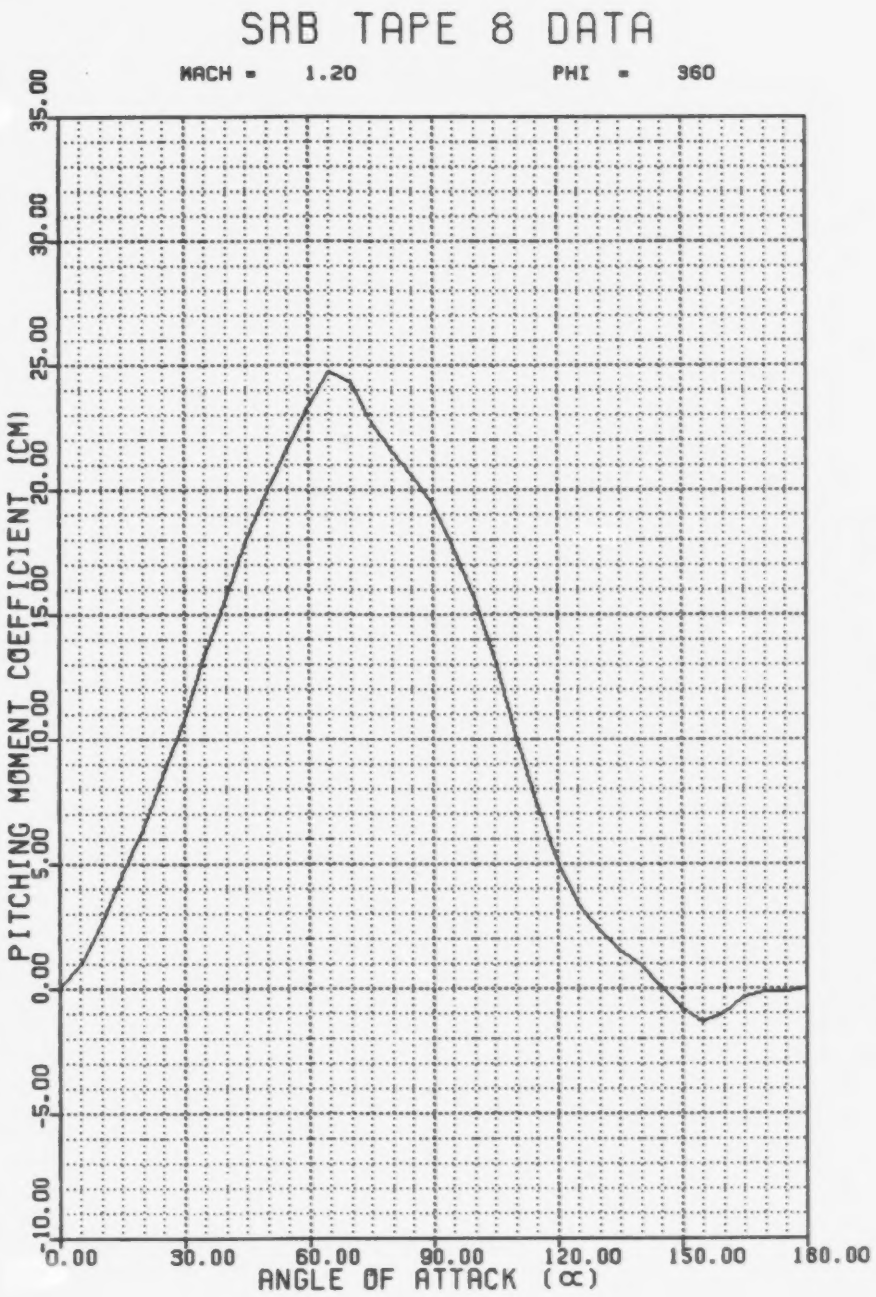
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 360
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25.00
20.00
15.00
10.00
5.00
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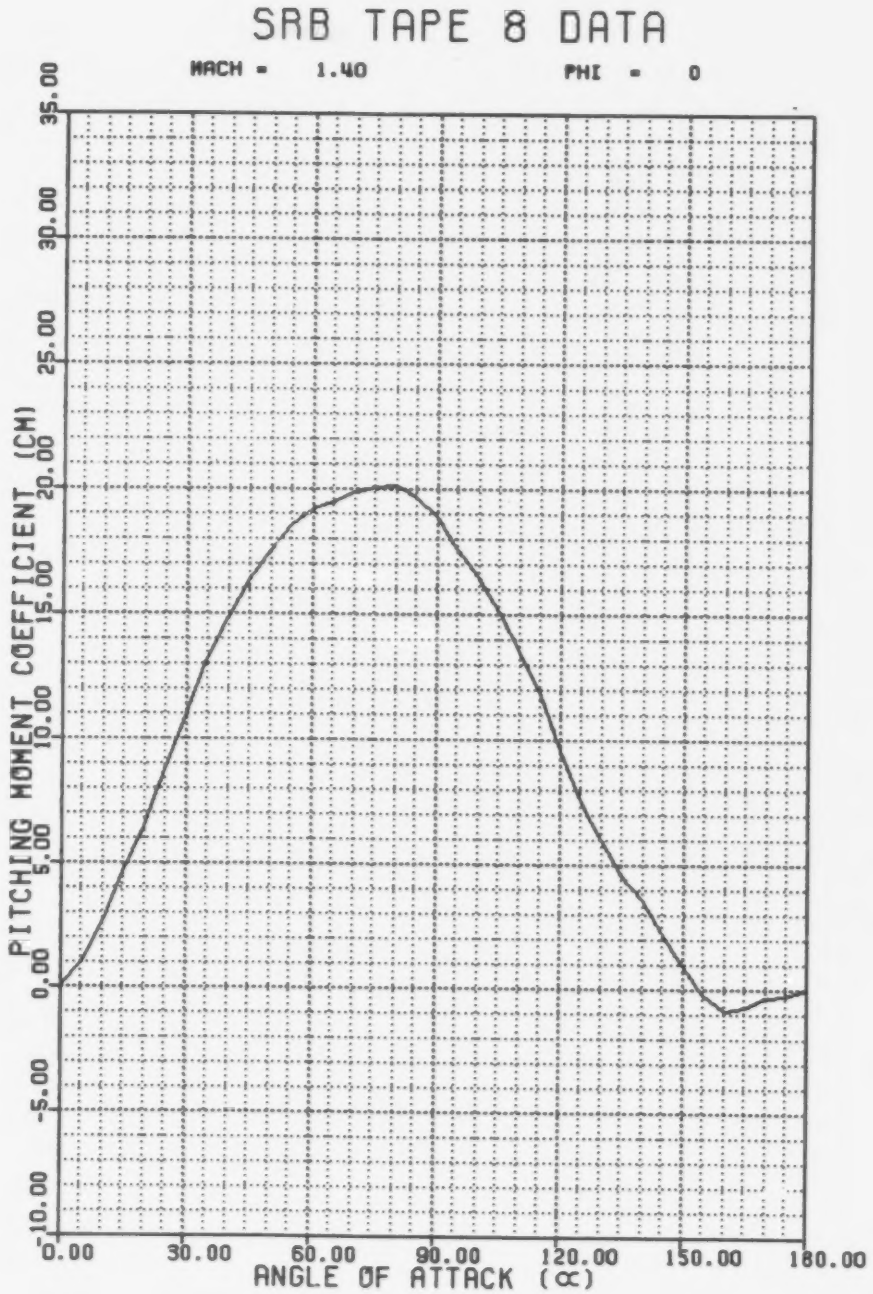
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
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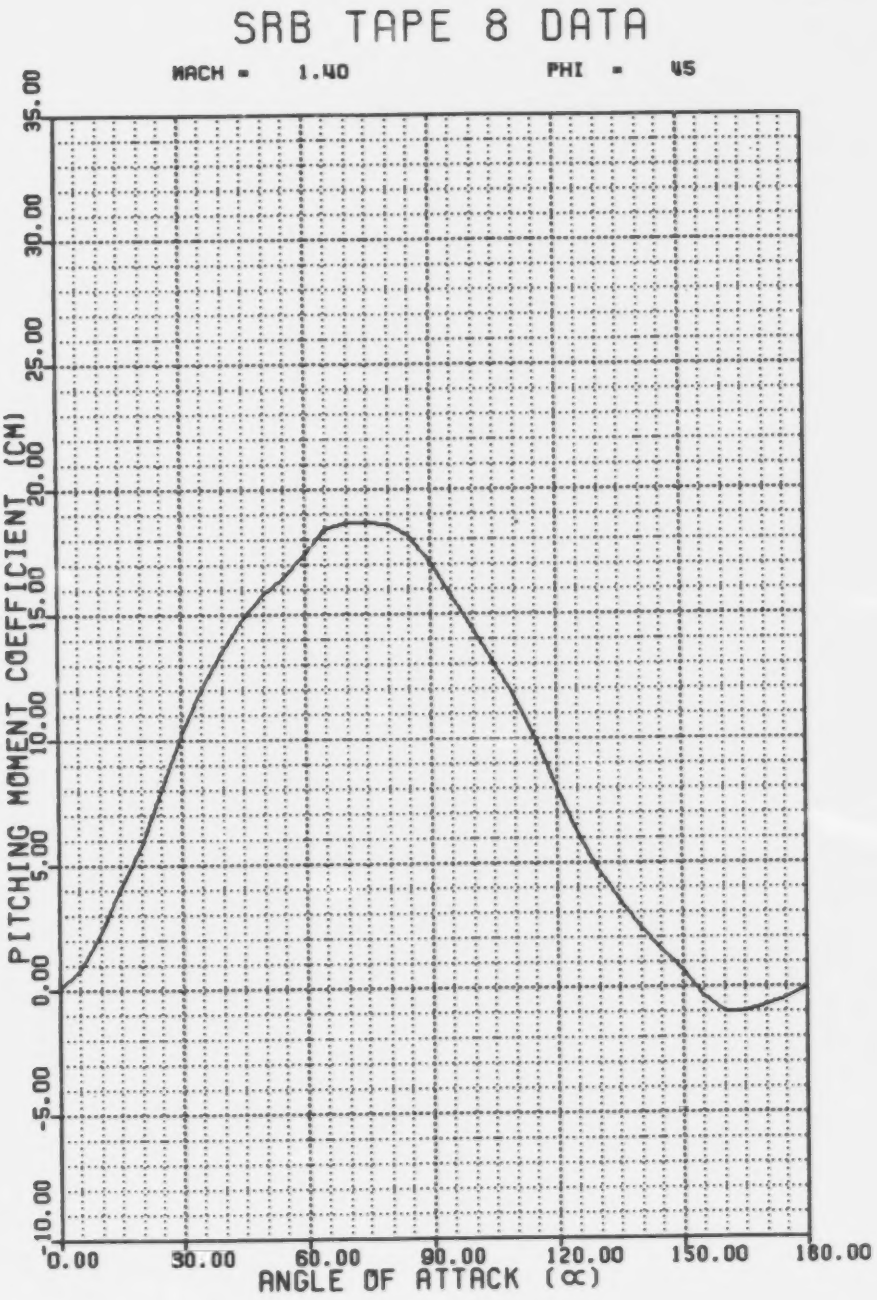
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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60.00
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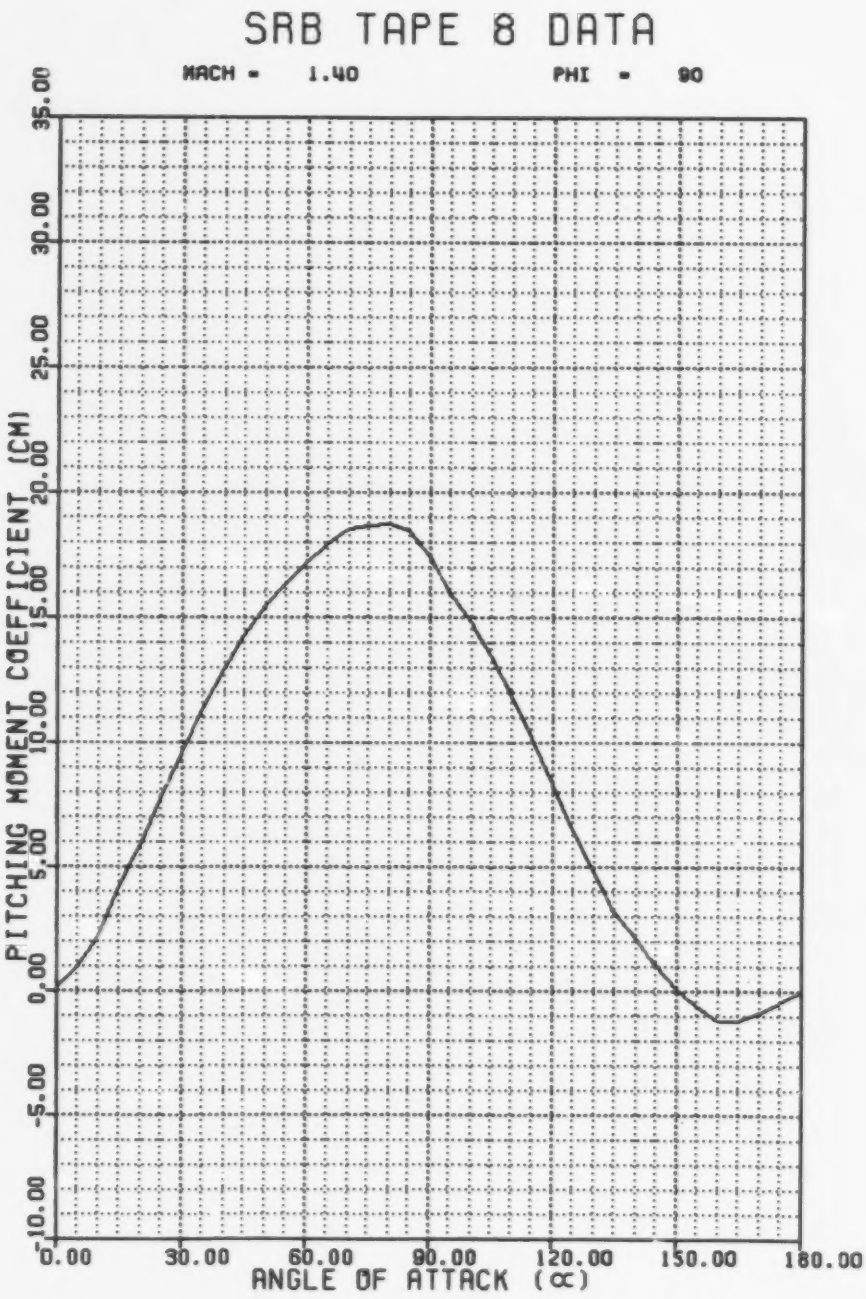
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
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60.00
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120.00
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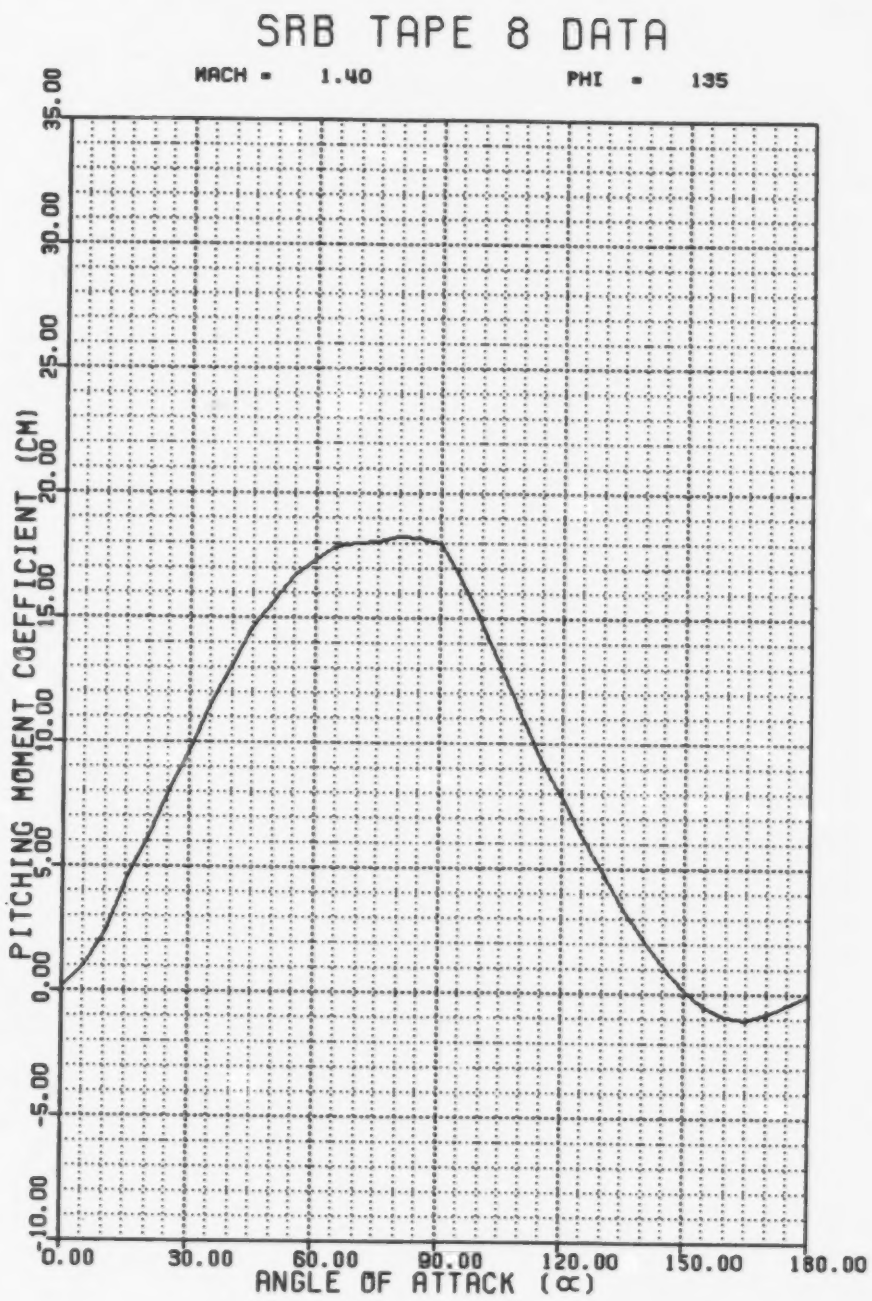
ANGLE OF ATTACK (α)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60.00
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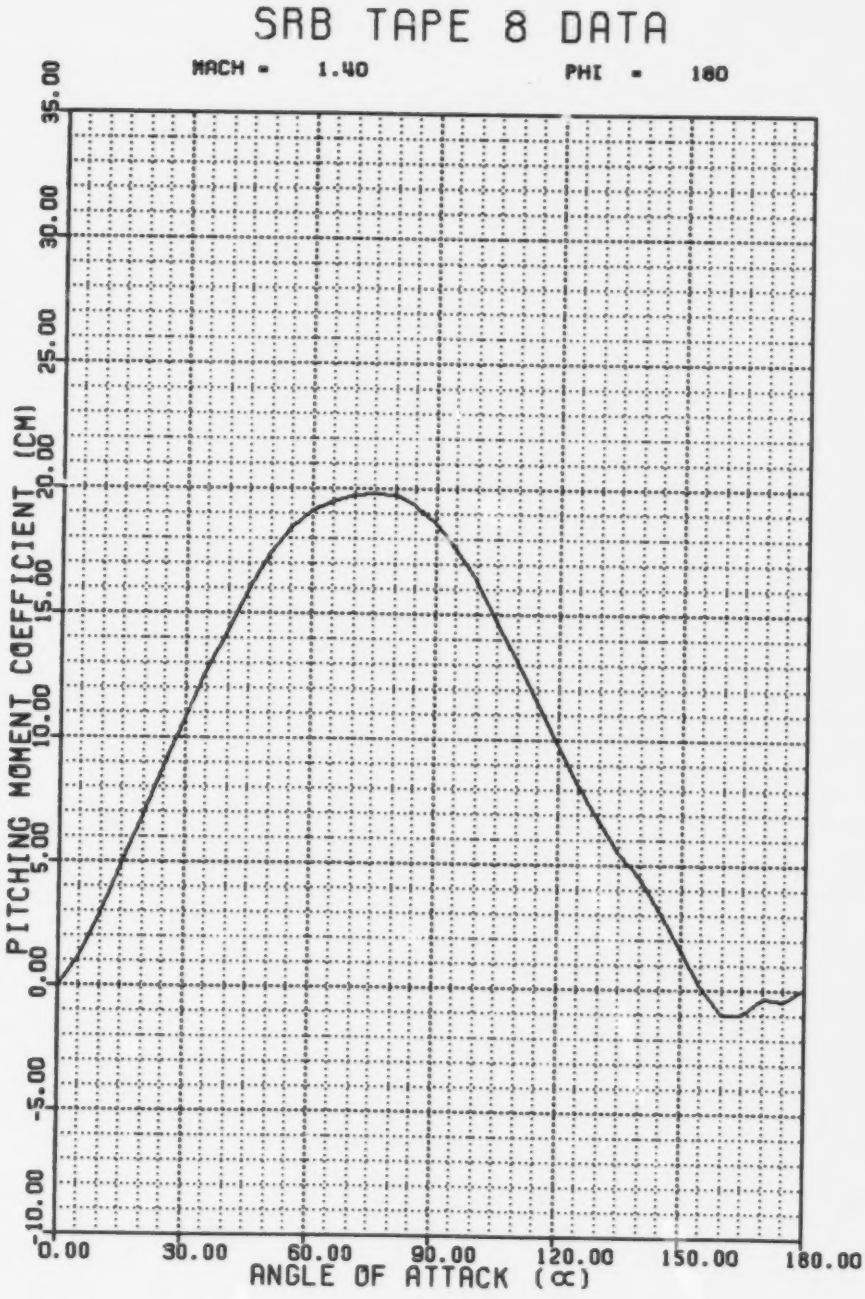
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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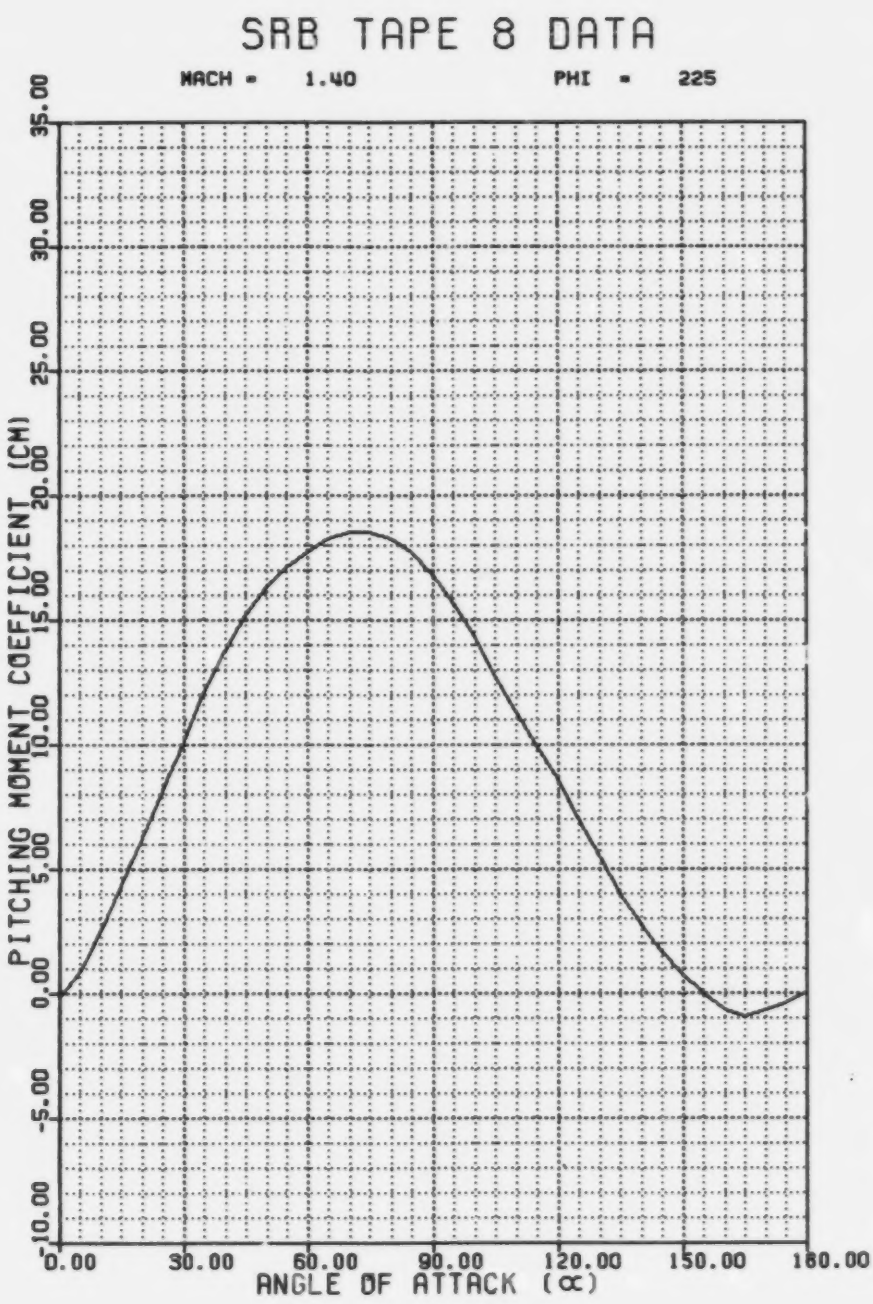
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
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60.00
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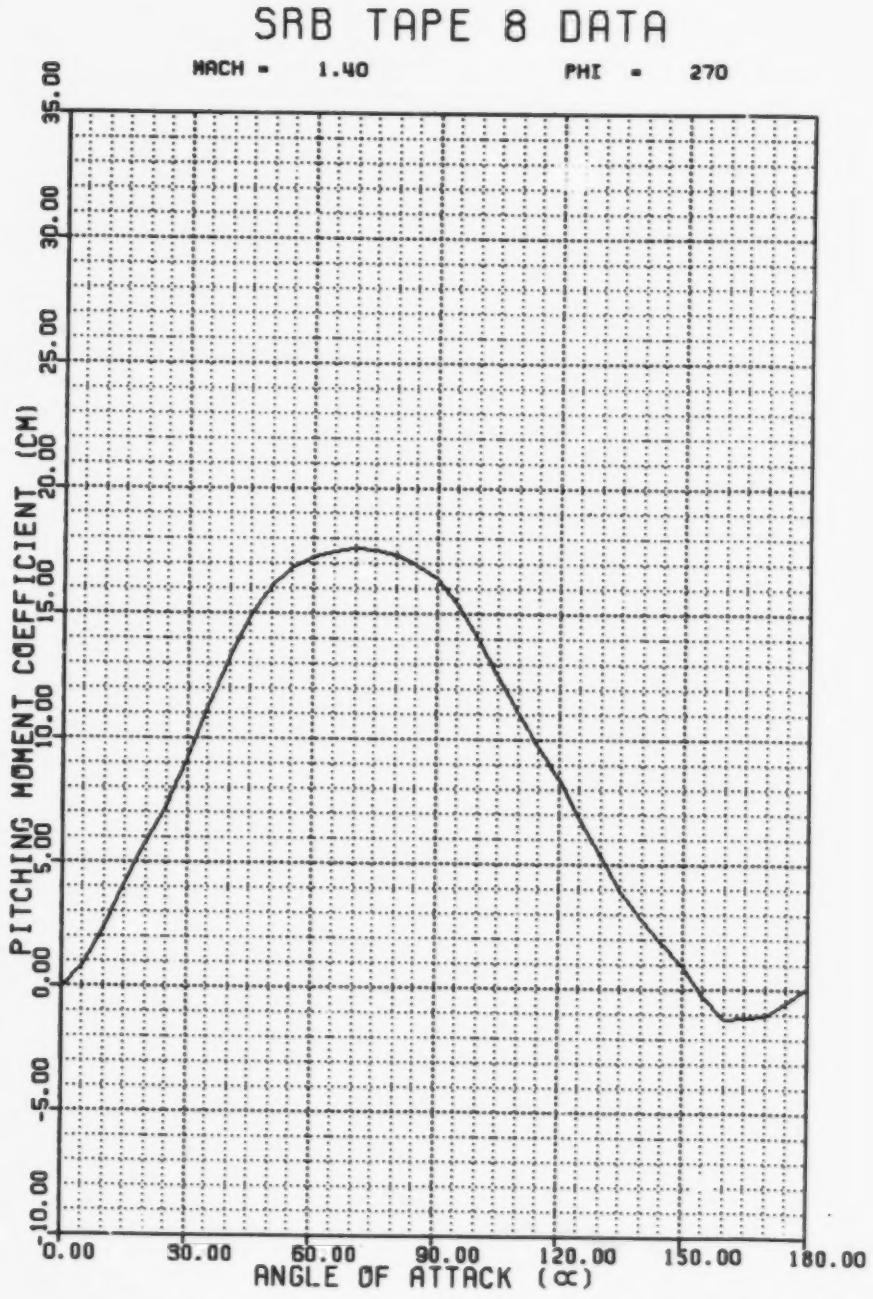
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
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60.00
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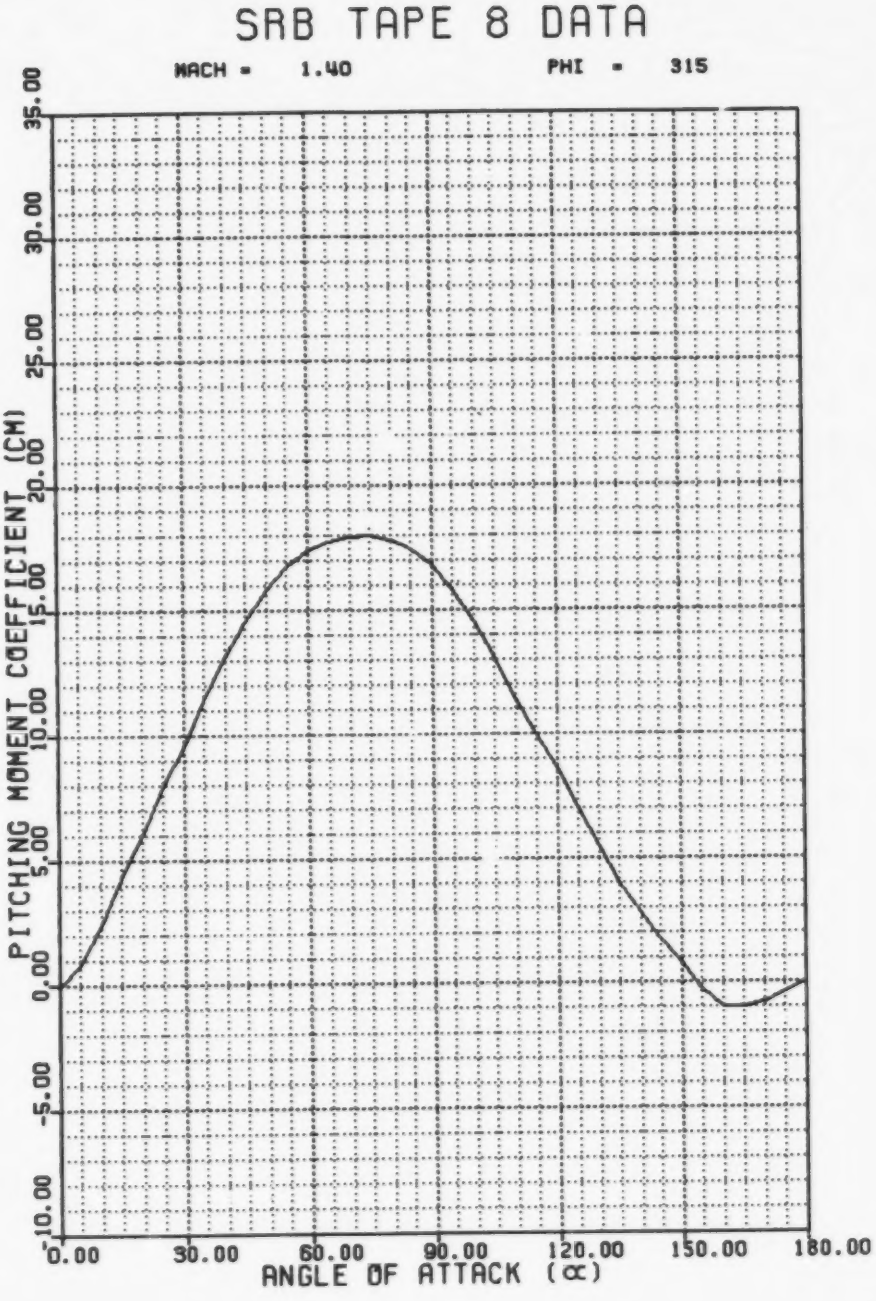
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 315
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120.00
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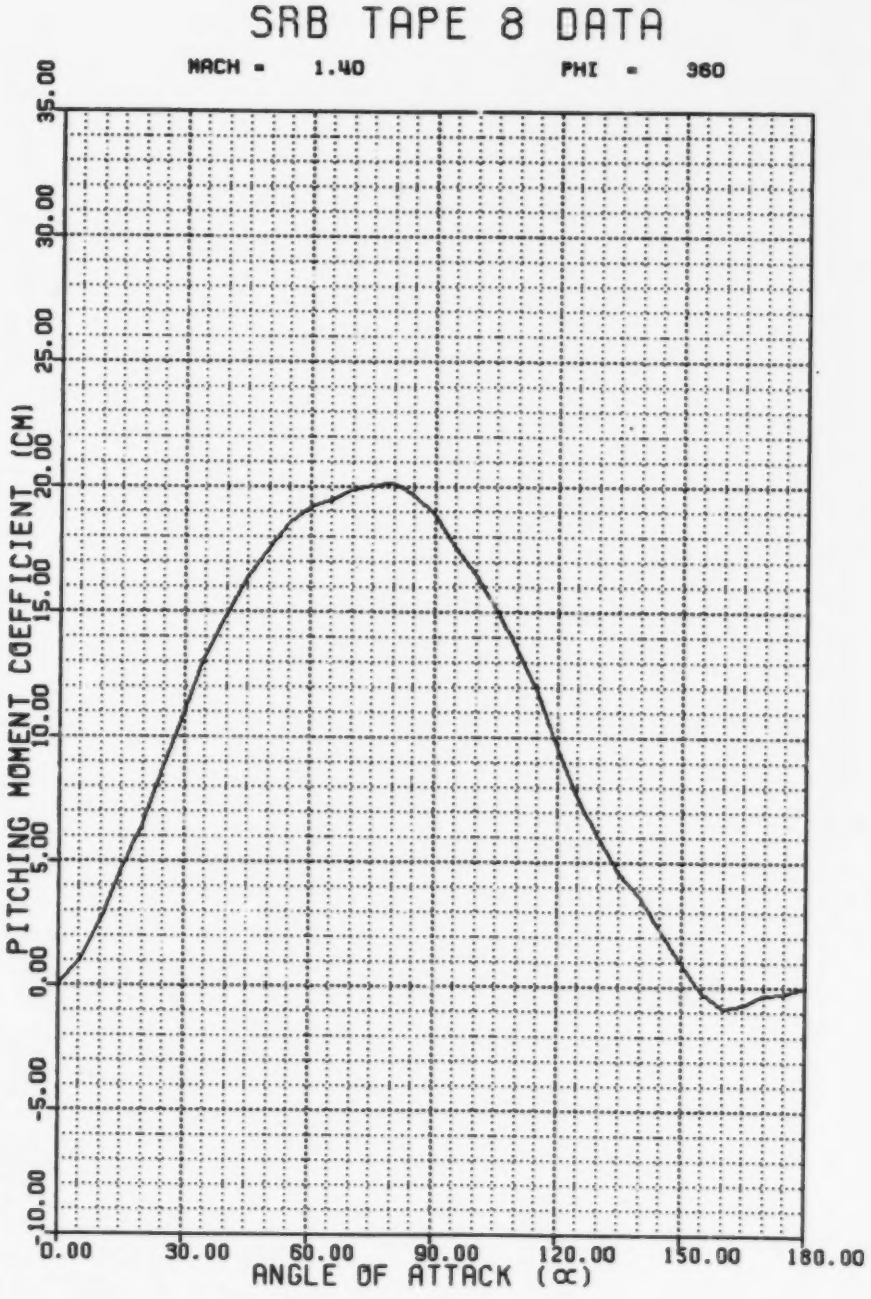
180.00
ANGLE OF ATTACK (α)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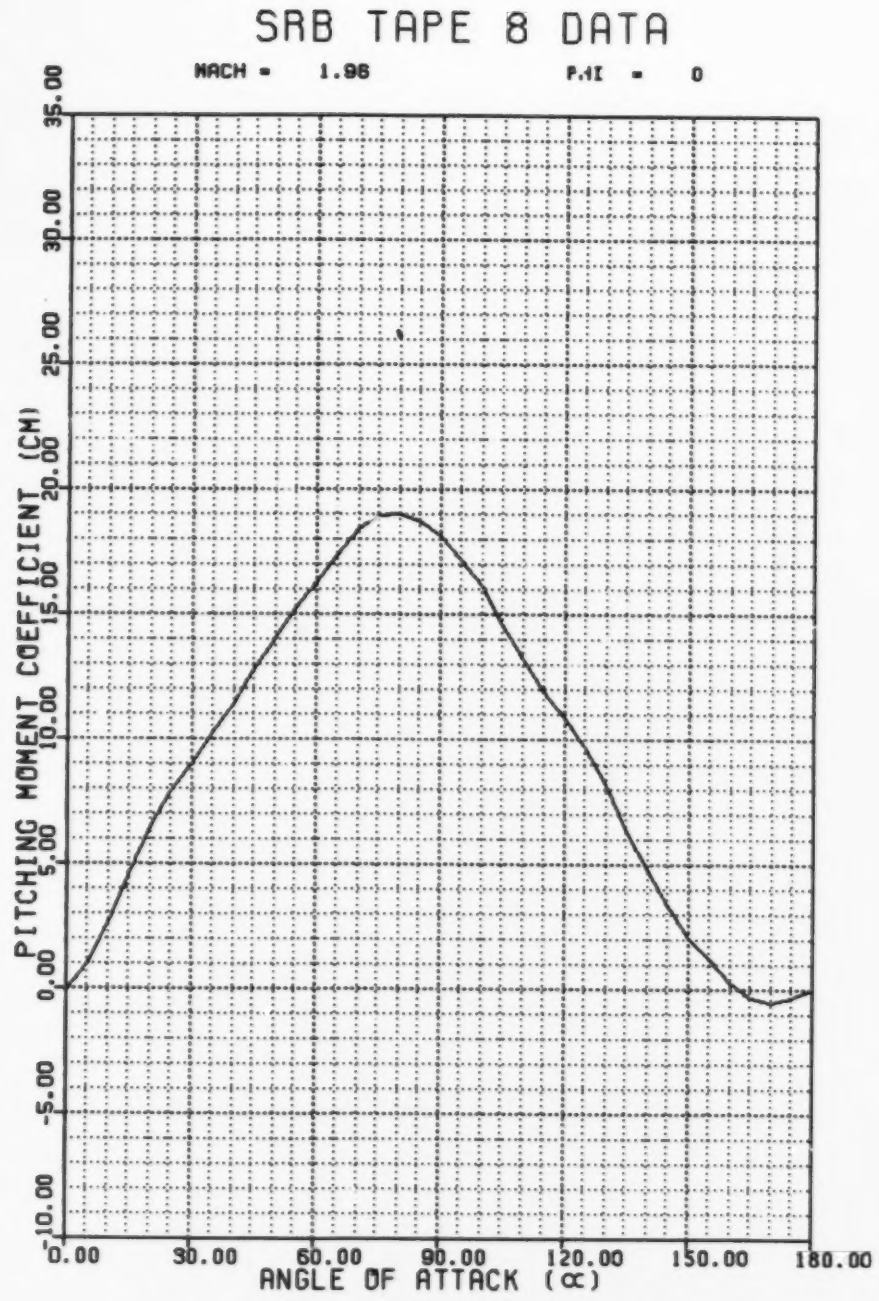
180.00
ANGLE OF ATTACK (α)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120.00
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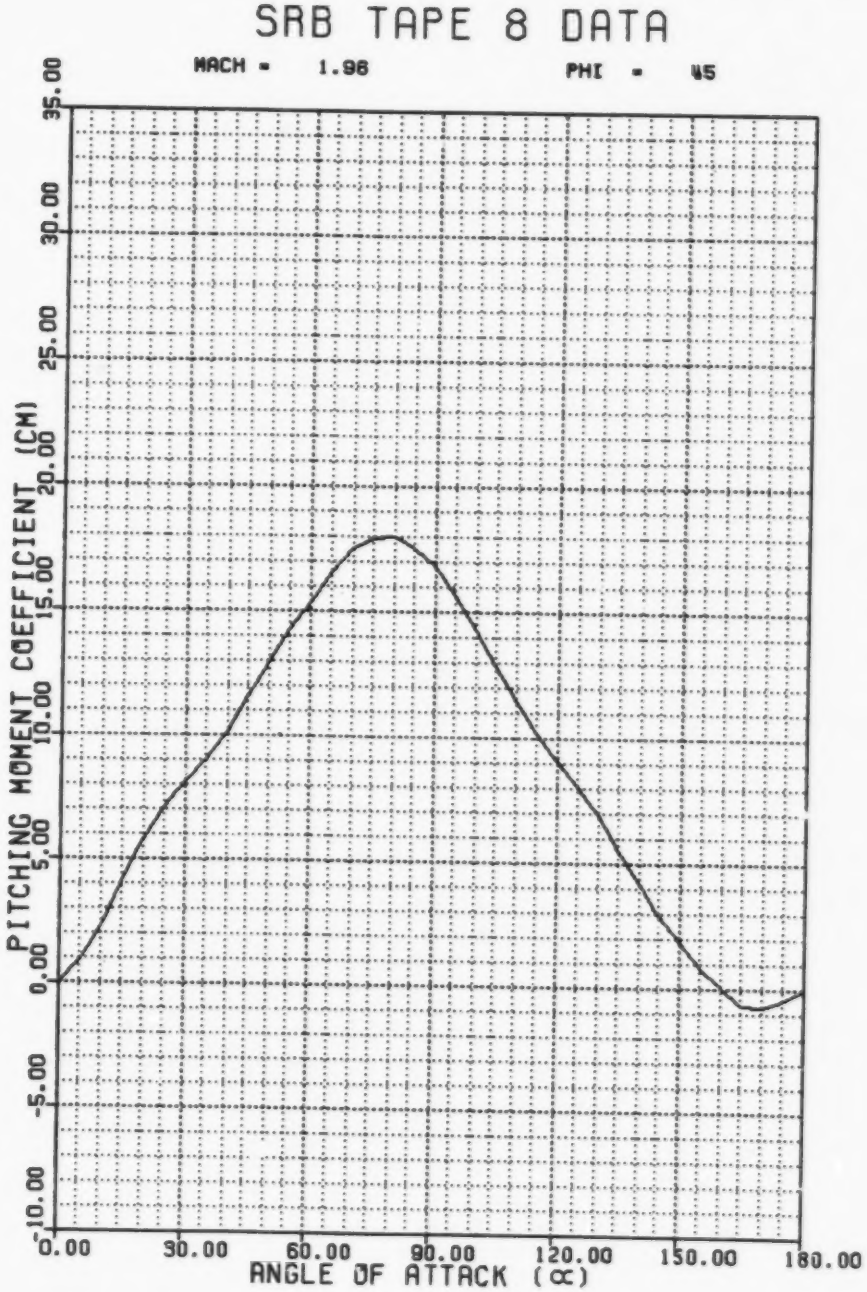
ANGLE OF ATTACK (α)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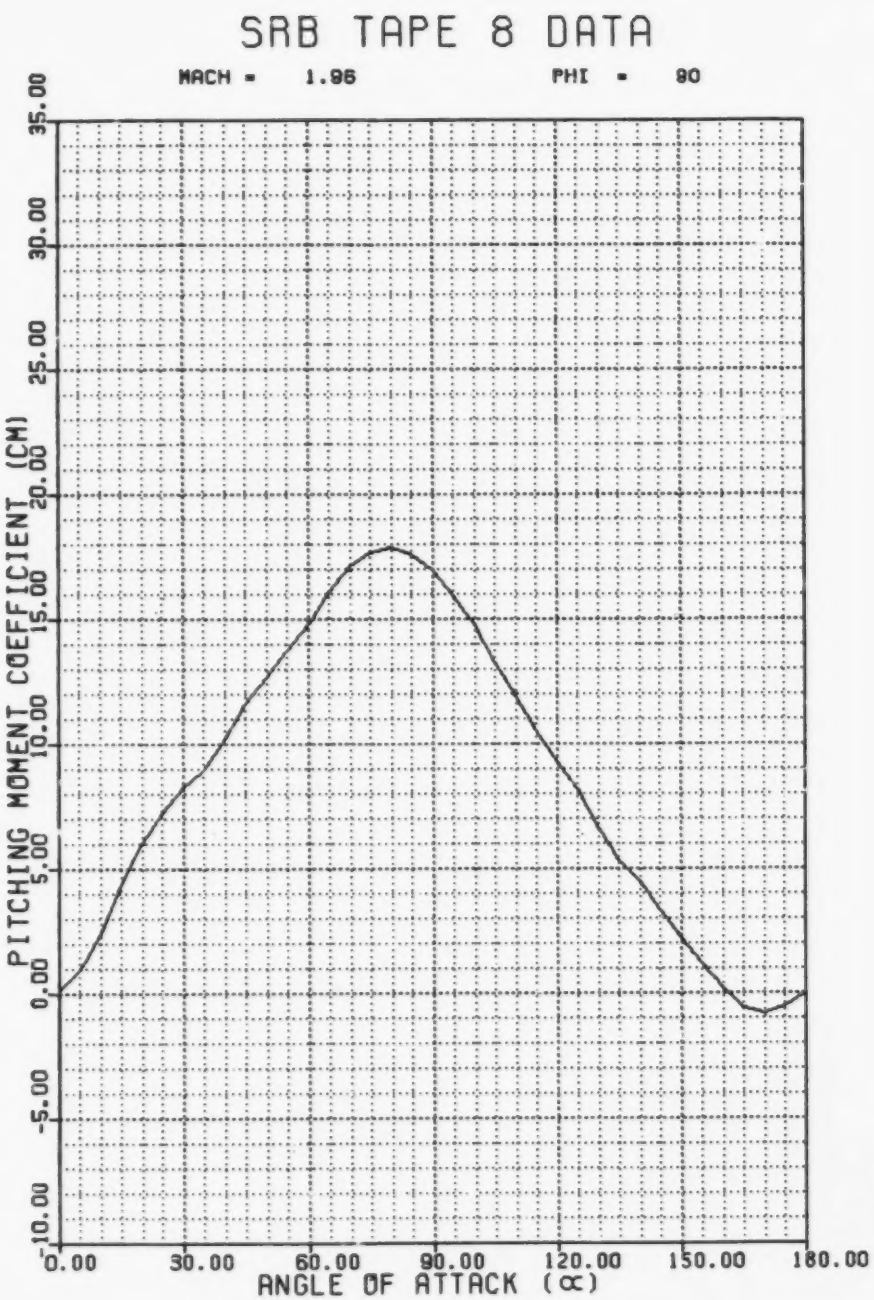
ANGLE OF ATTACK (α)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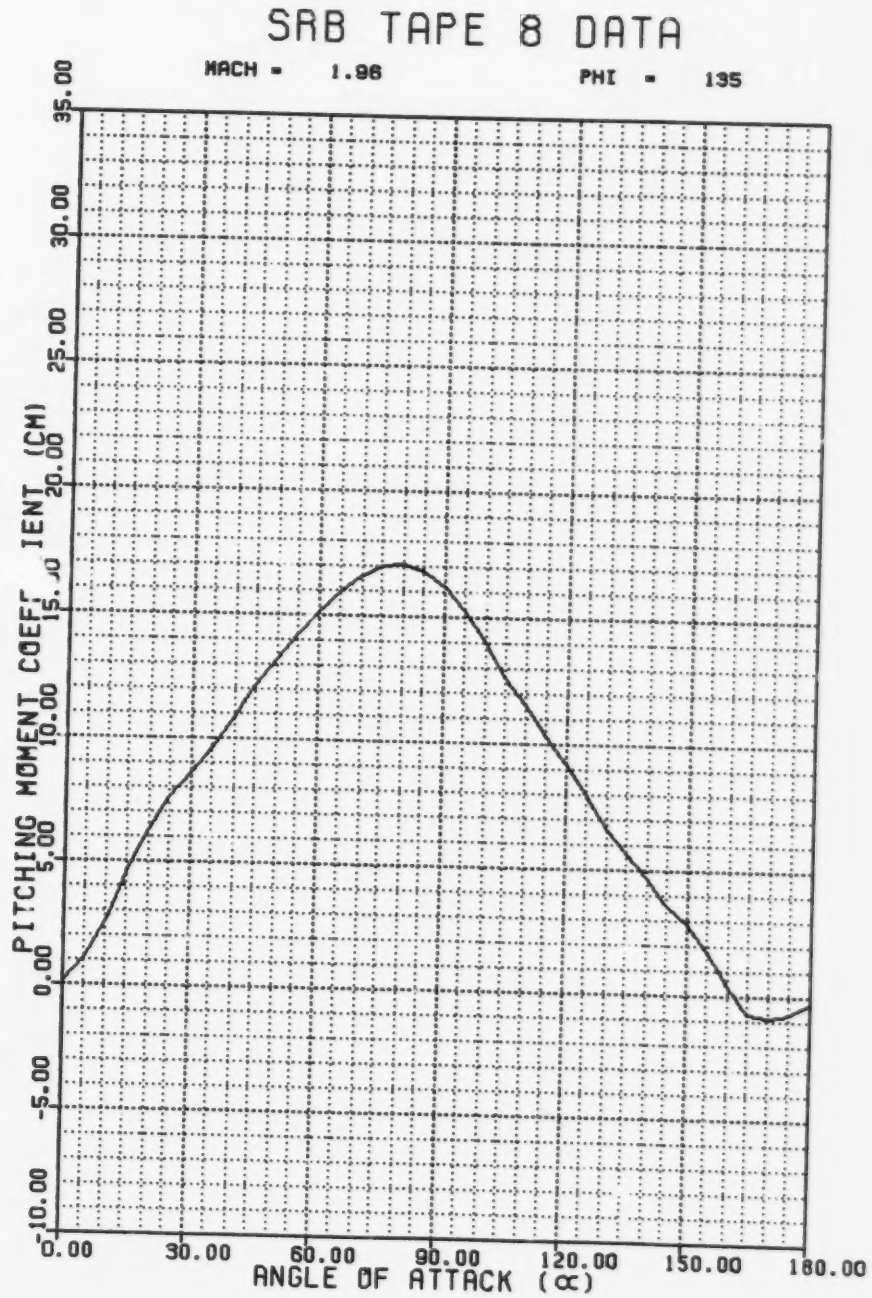
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.98
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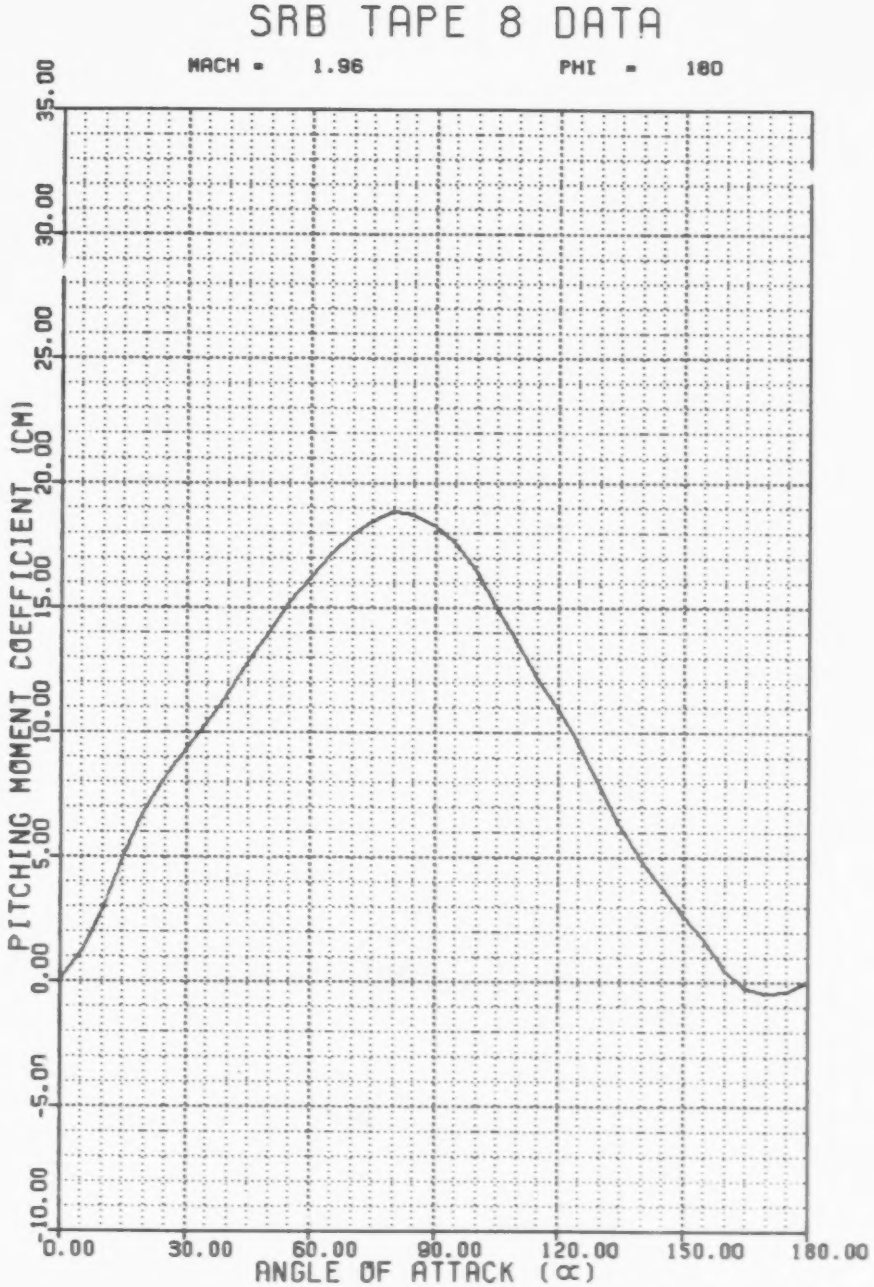
ANGLE OF ATTACK (α)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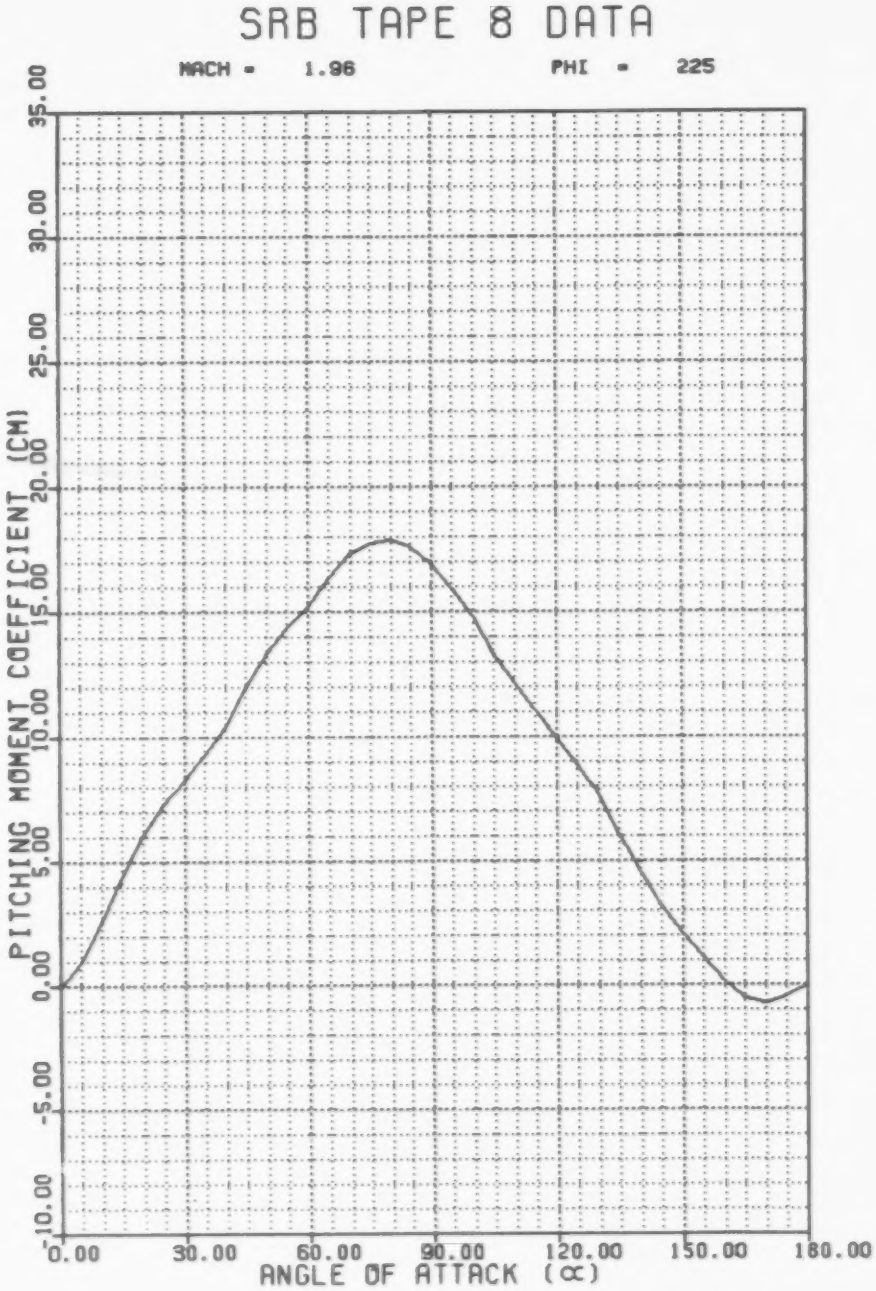
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
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-10.00
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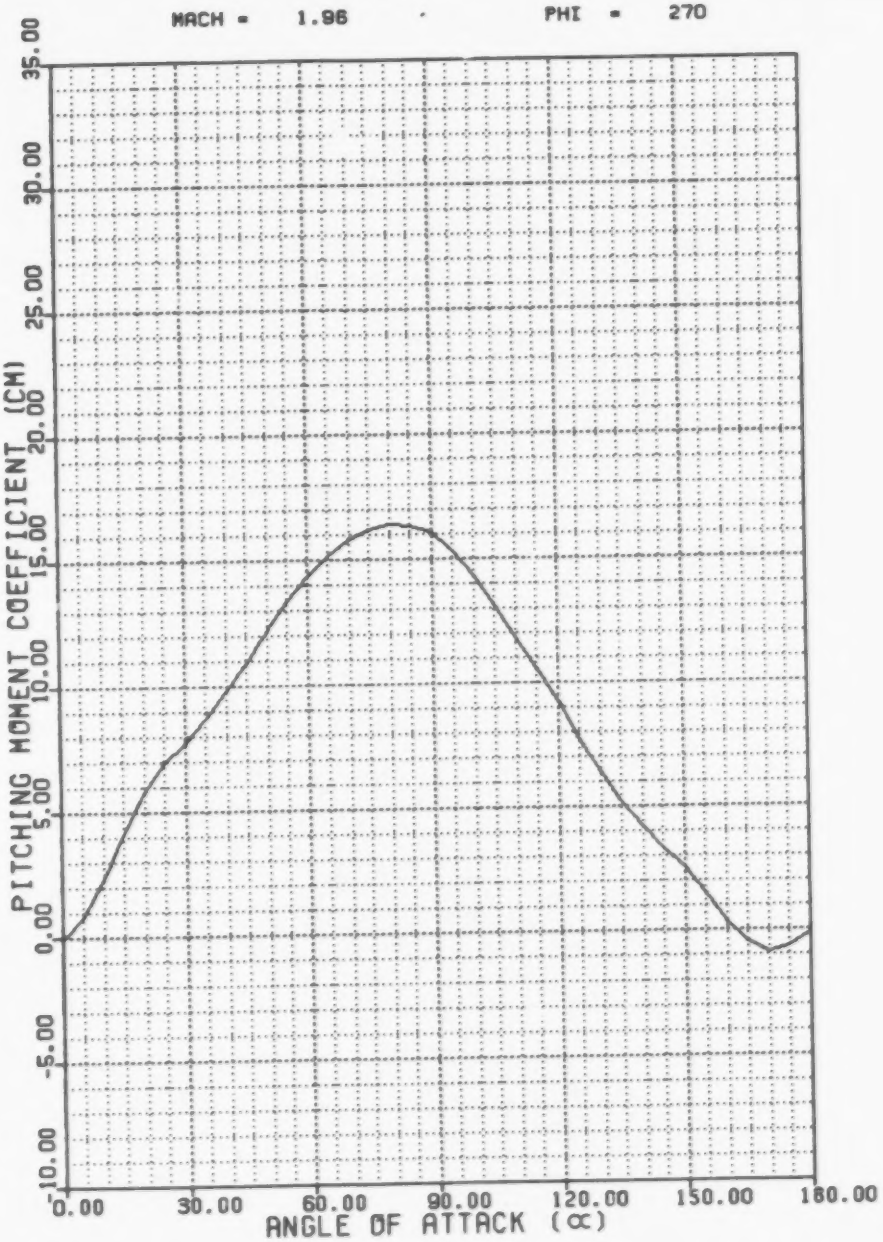
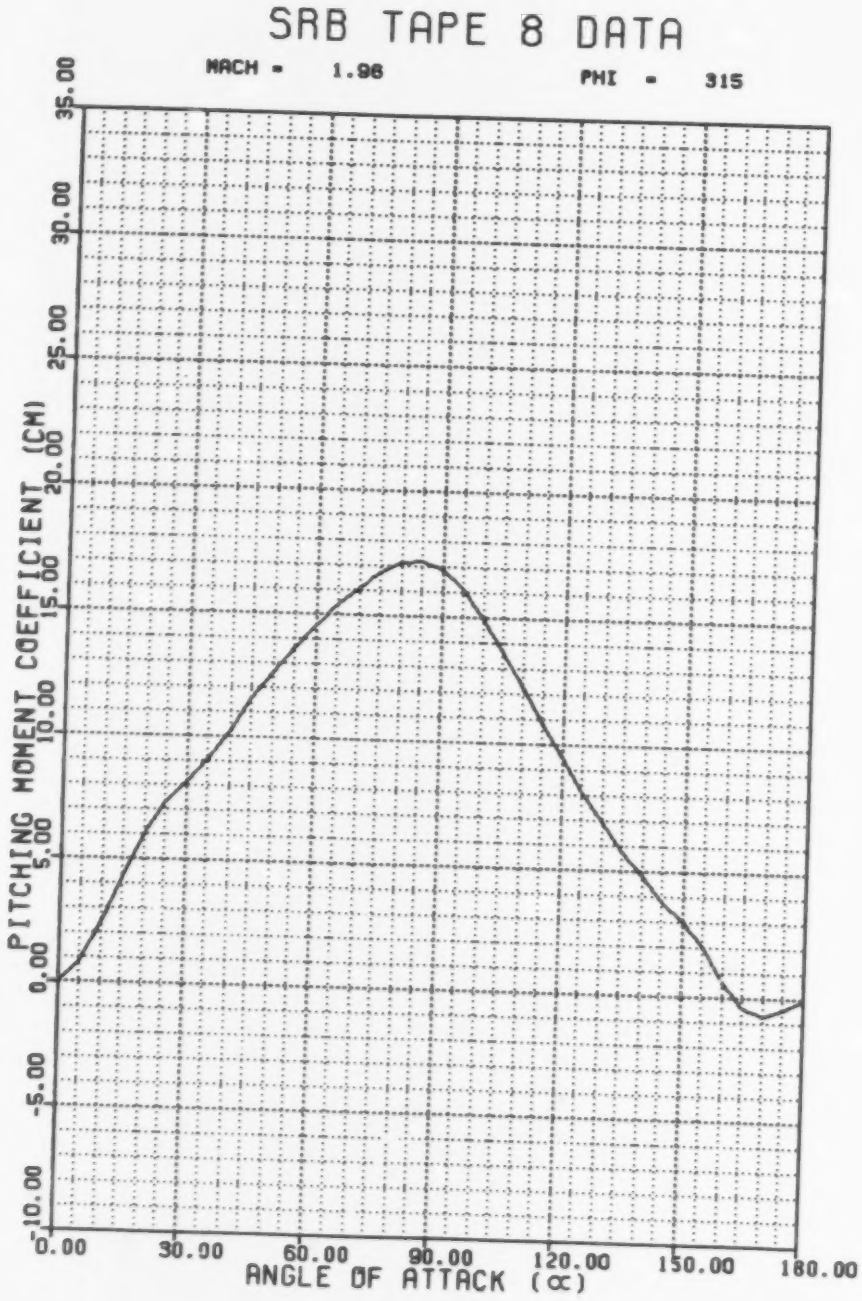
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.96 PHI = 270




SRB TAPE 8 DATA
MACH = 1.96
PHI = 315
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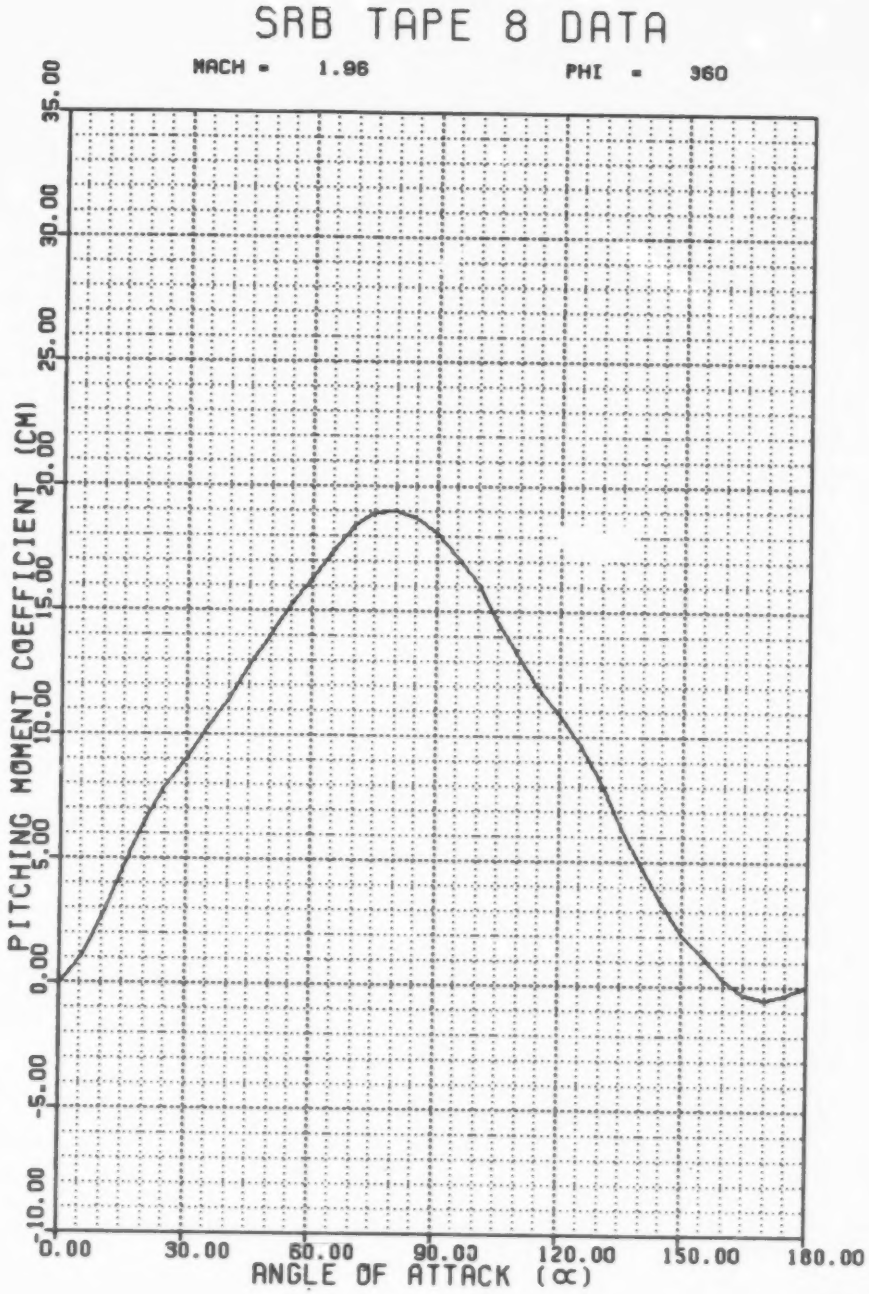
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 360
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120.00
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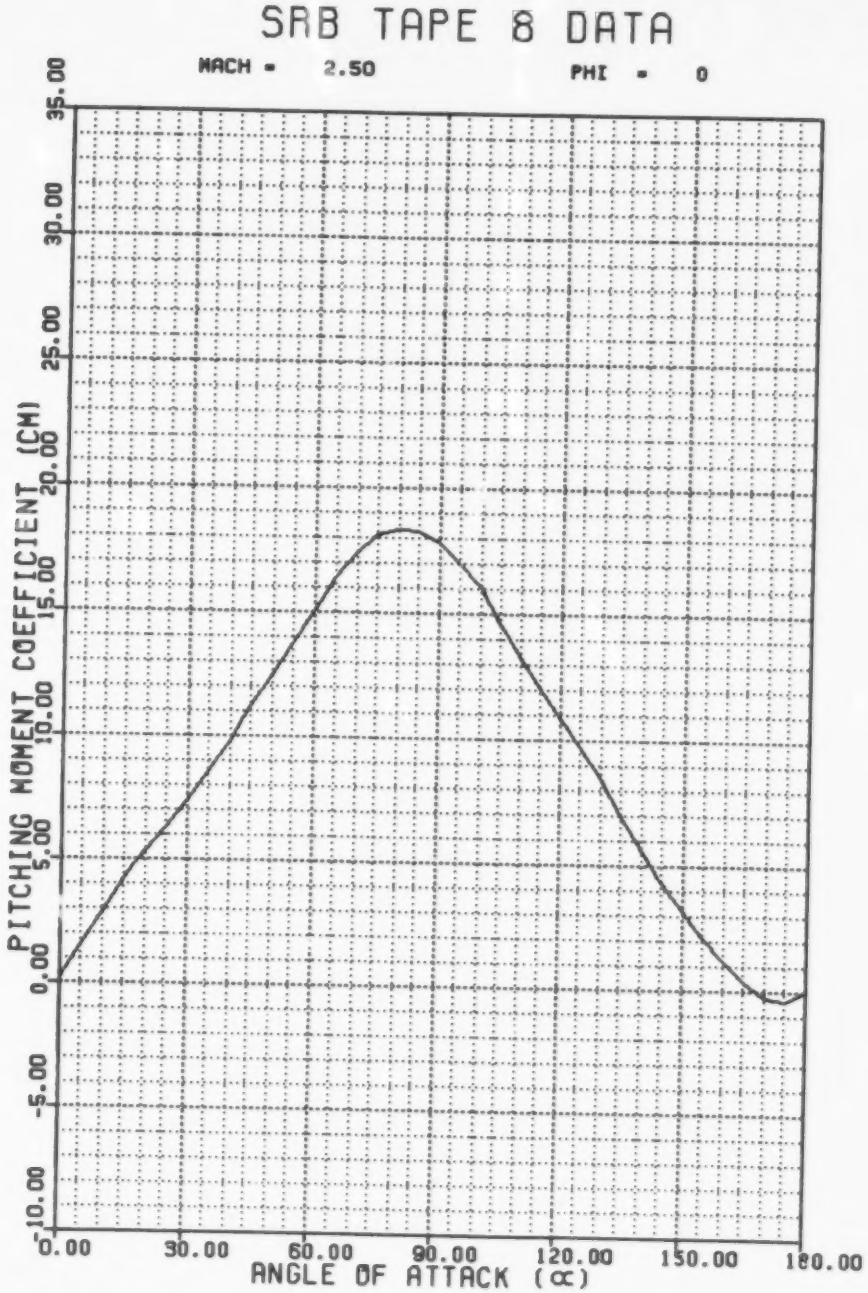
180.00
ANGLE OF ATTACK (α)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PHI = 0
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0.00
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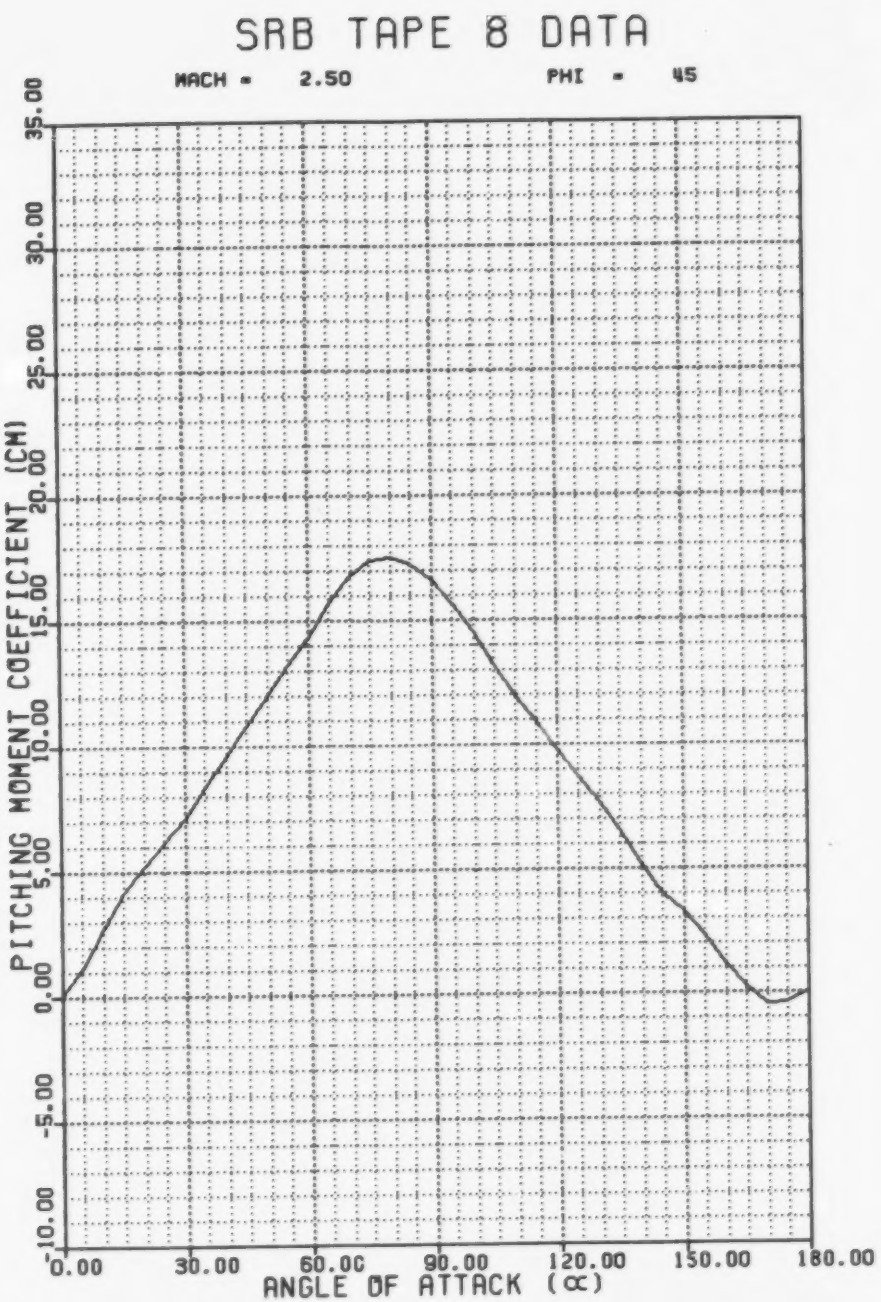
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 2.50
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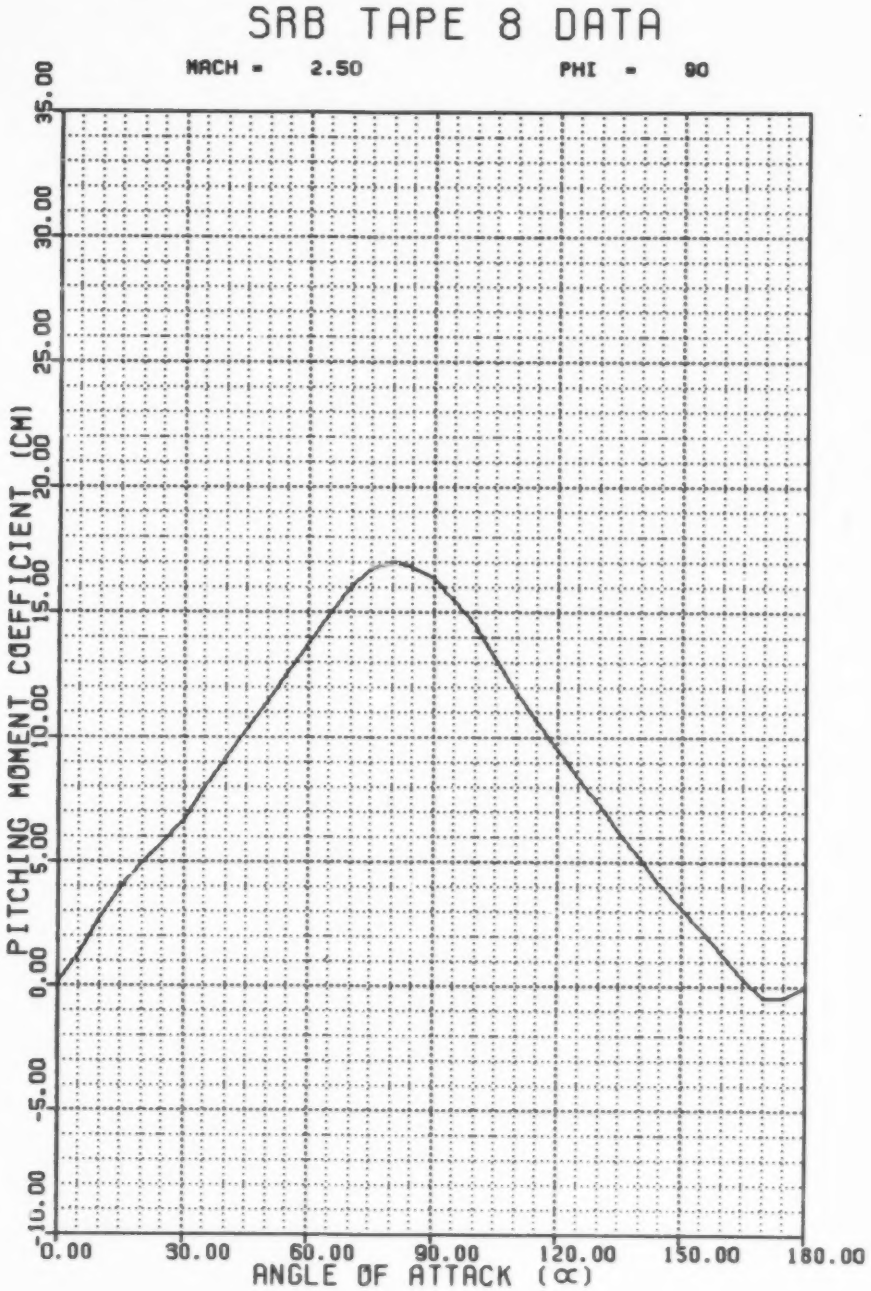
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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5.00
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60.00
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120.00
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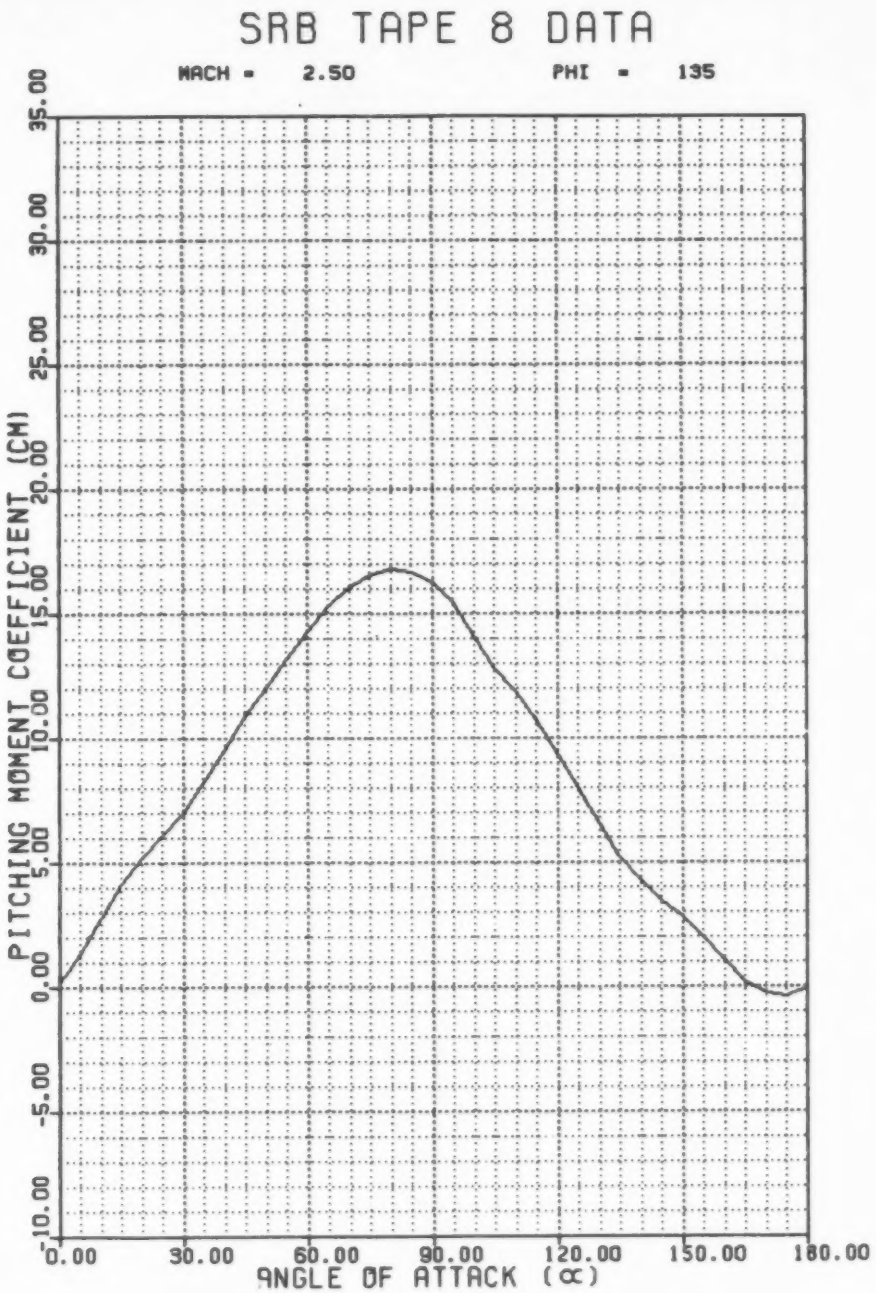
ANGLE OF ATTACK (α)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120.00
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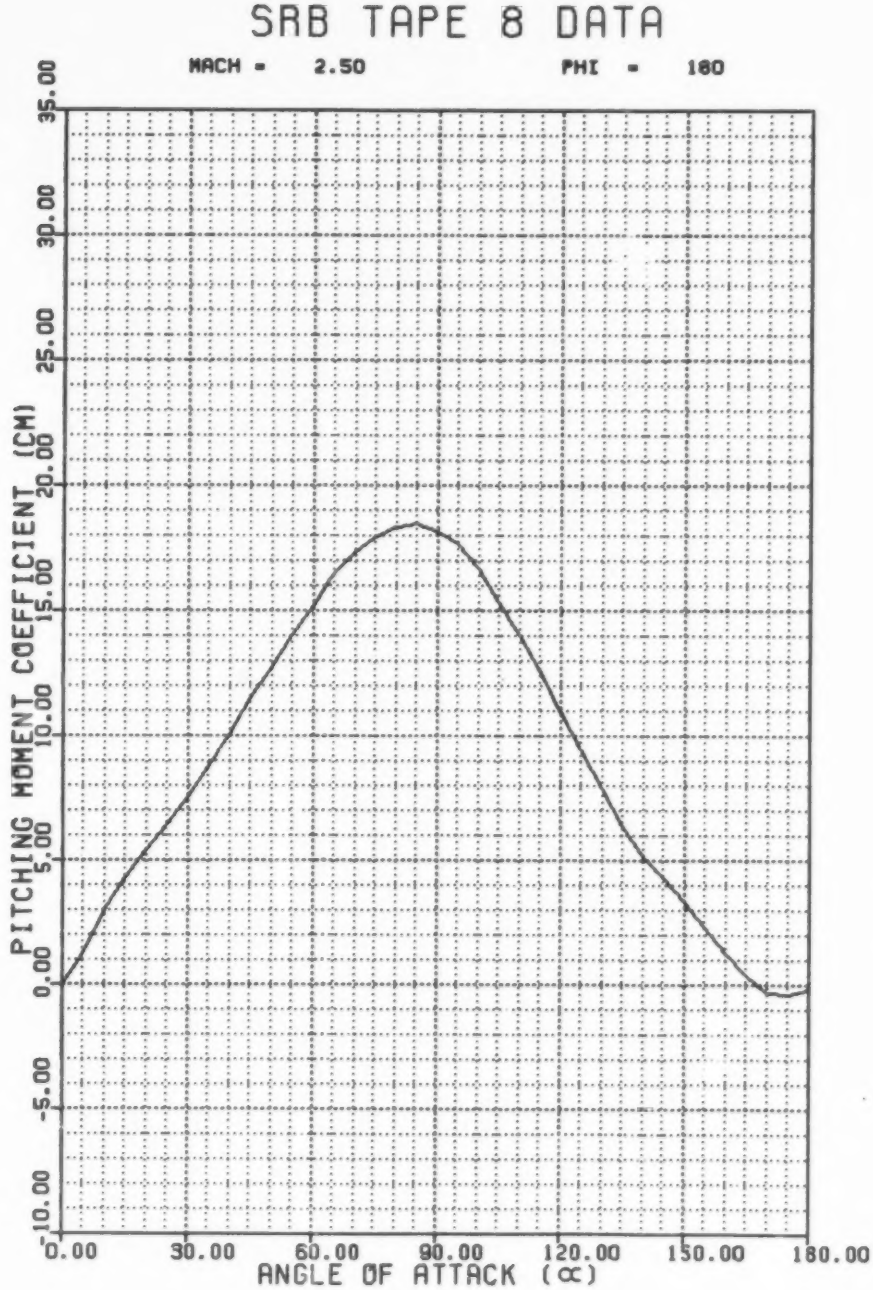
ANGLE OF ATTACK (α)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60.00
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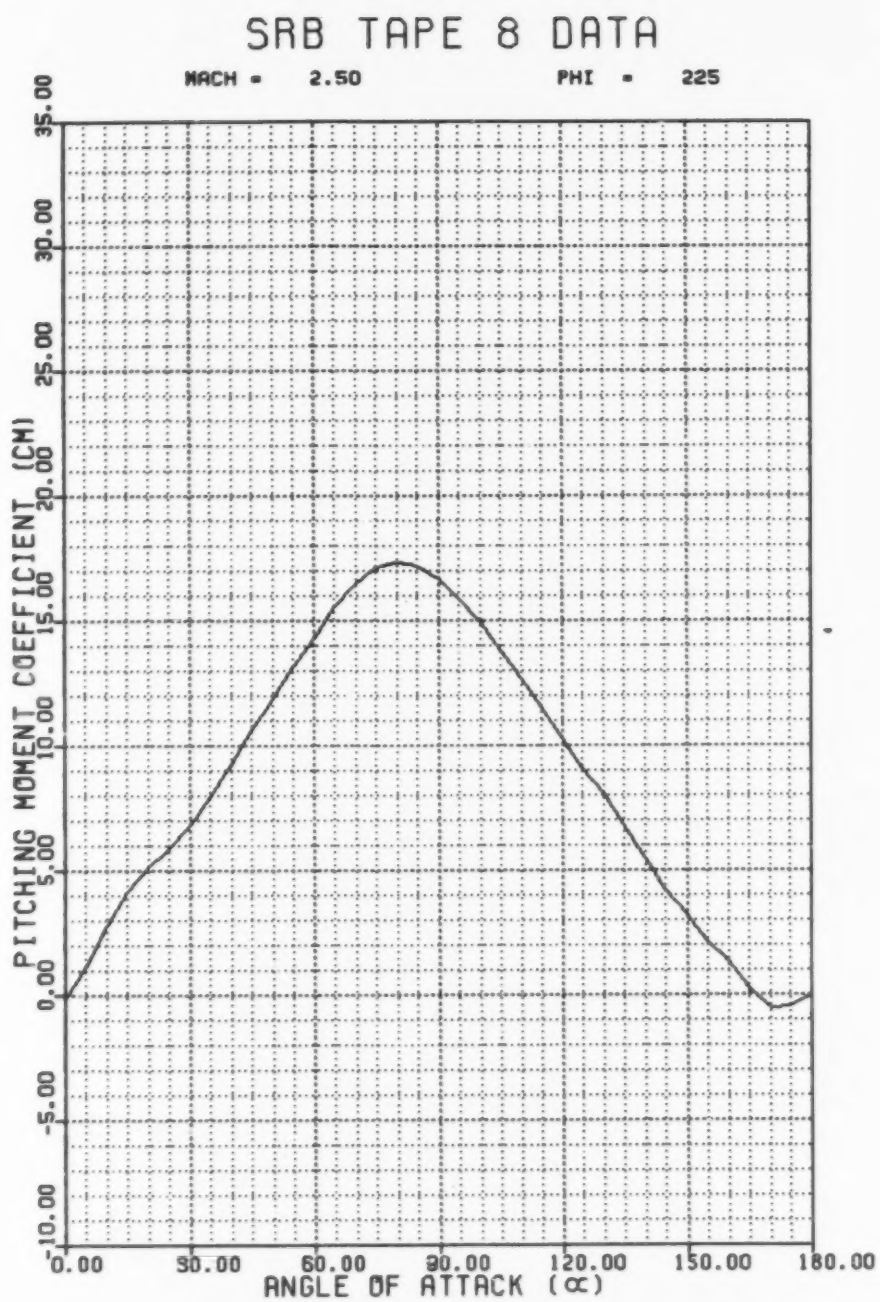
ANGLE OF ATTACK (α)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5.00
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60.00
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120.00
150.00
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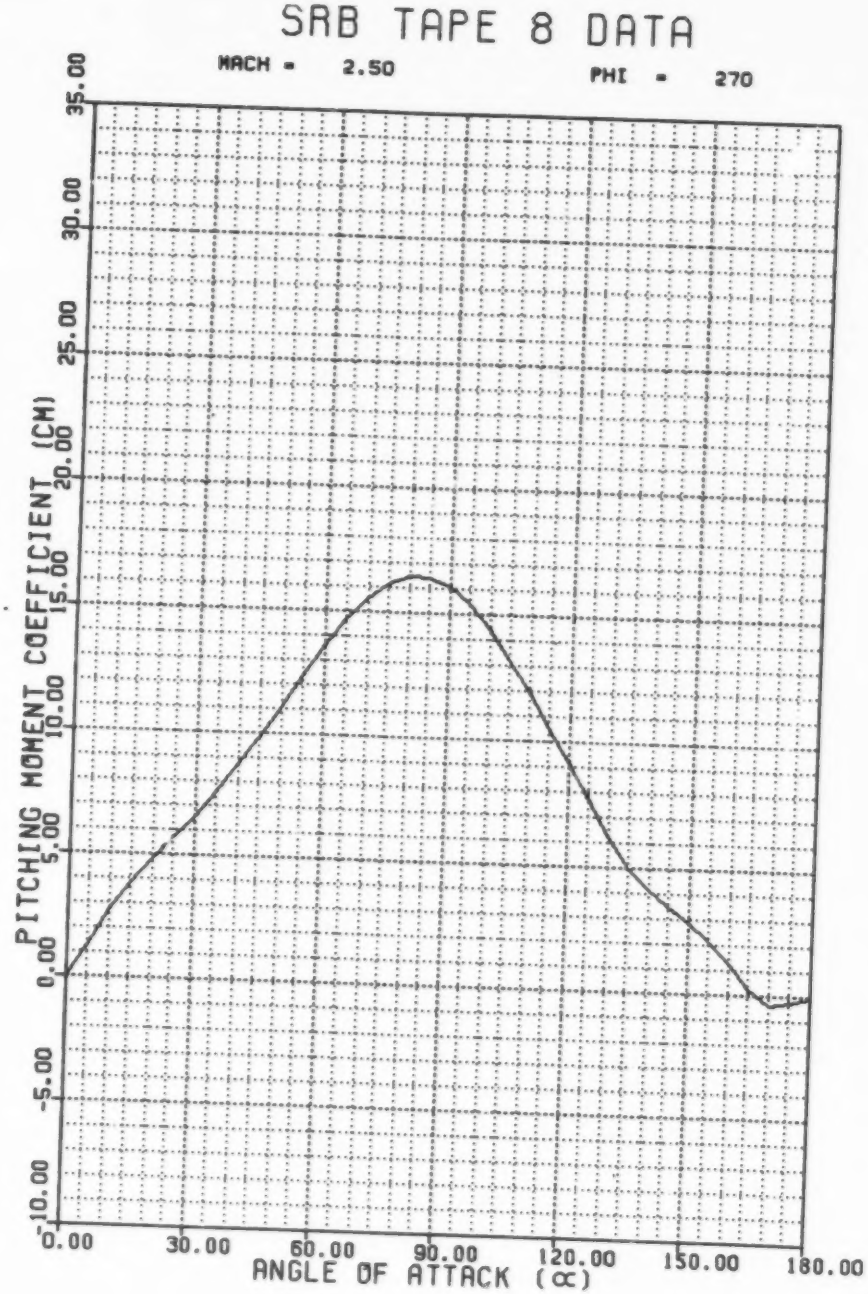
ANGLE OF ATTACK (α)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5.00
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120.00
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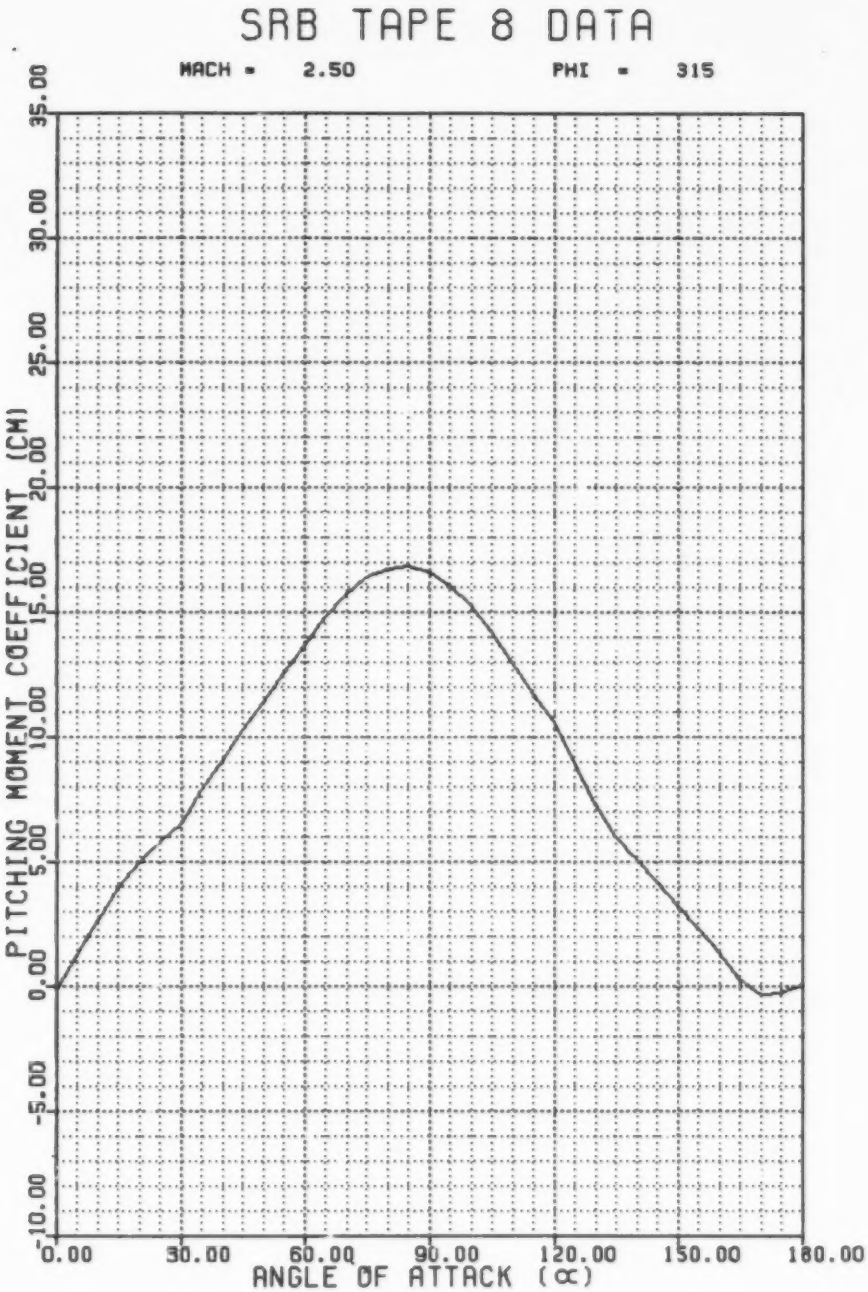
ANGLE OF ATTACK (α)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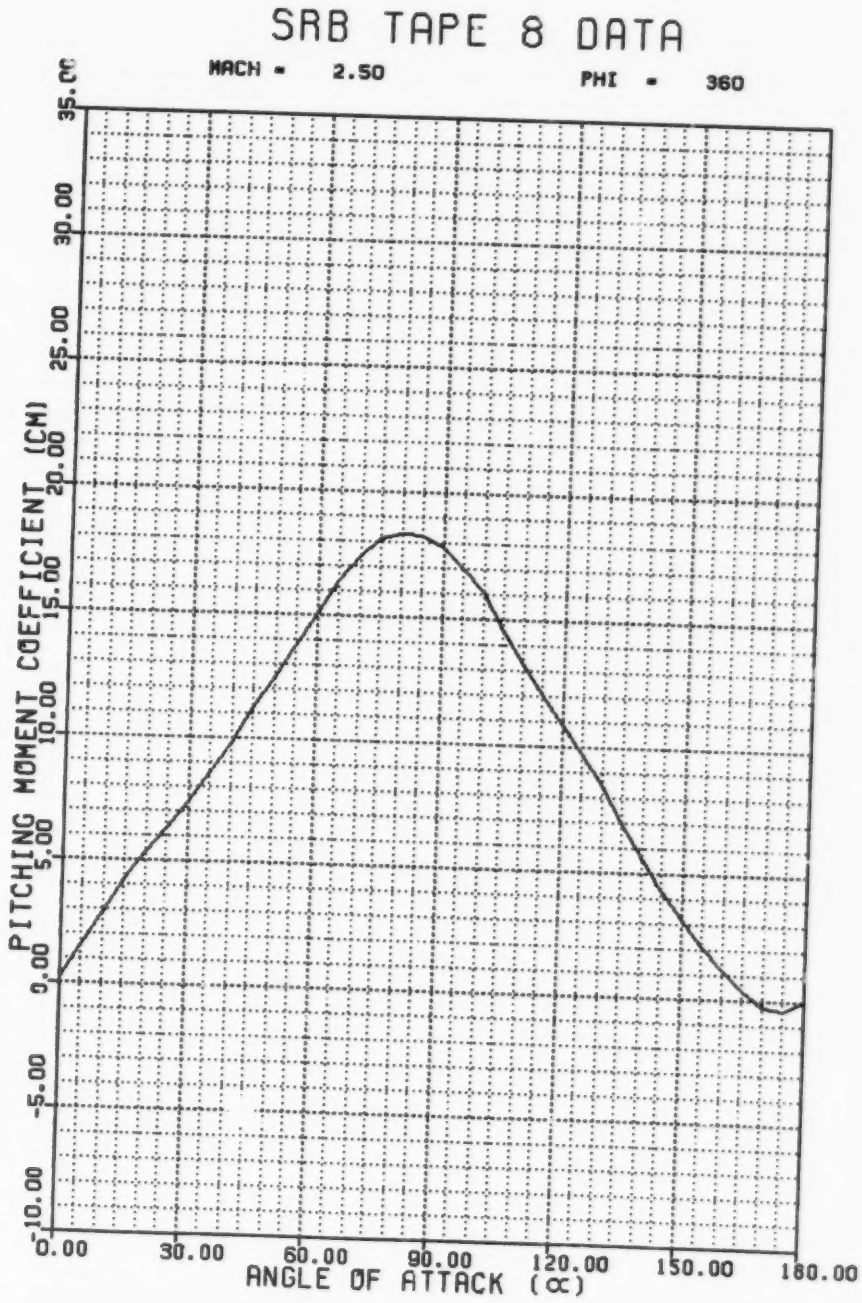
ANGLE OF ATTACK (α)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120.00
150.00
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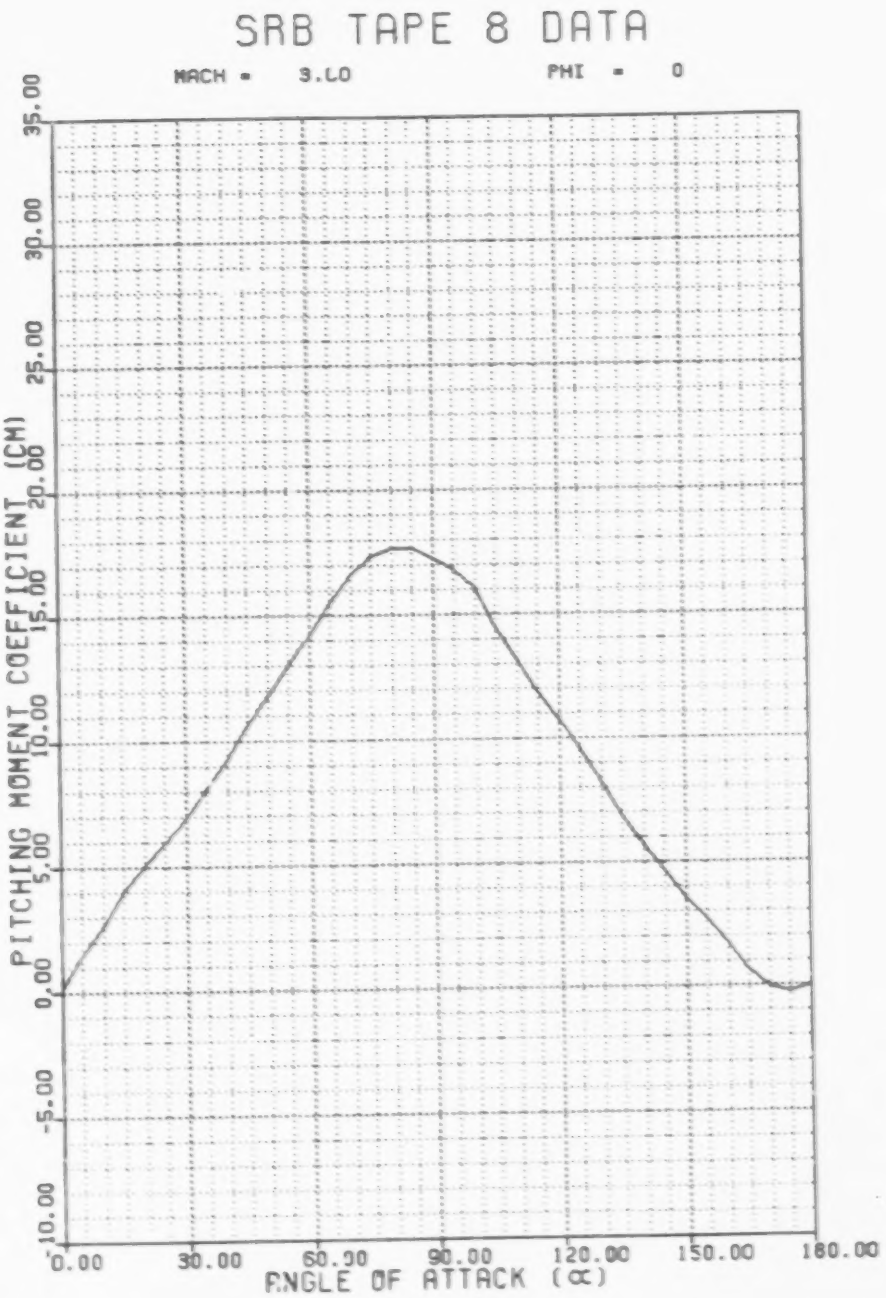
ANGLE OF ATTACK (α)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60.00
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120.00
150.00
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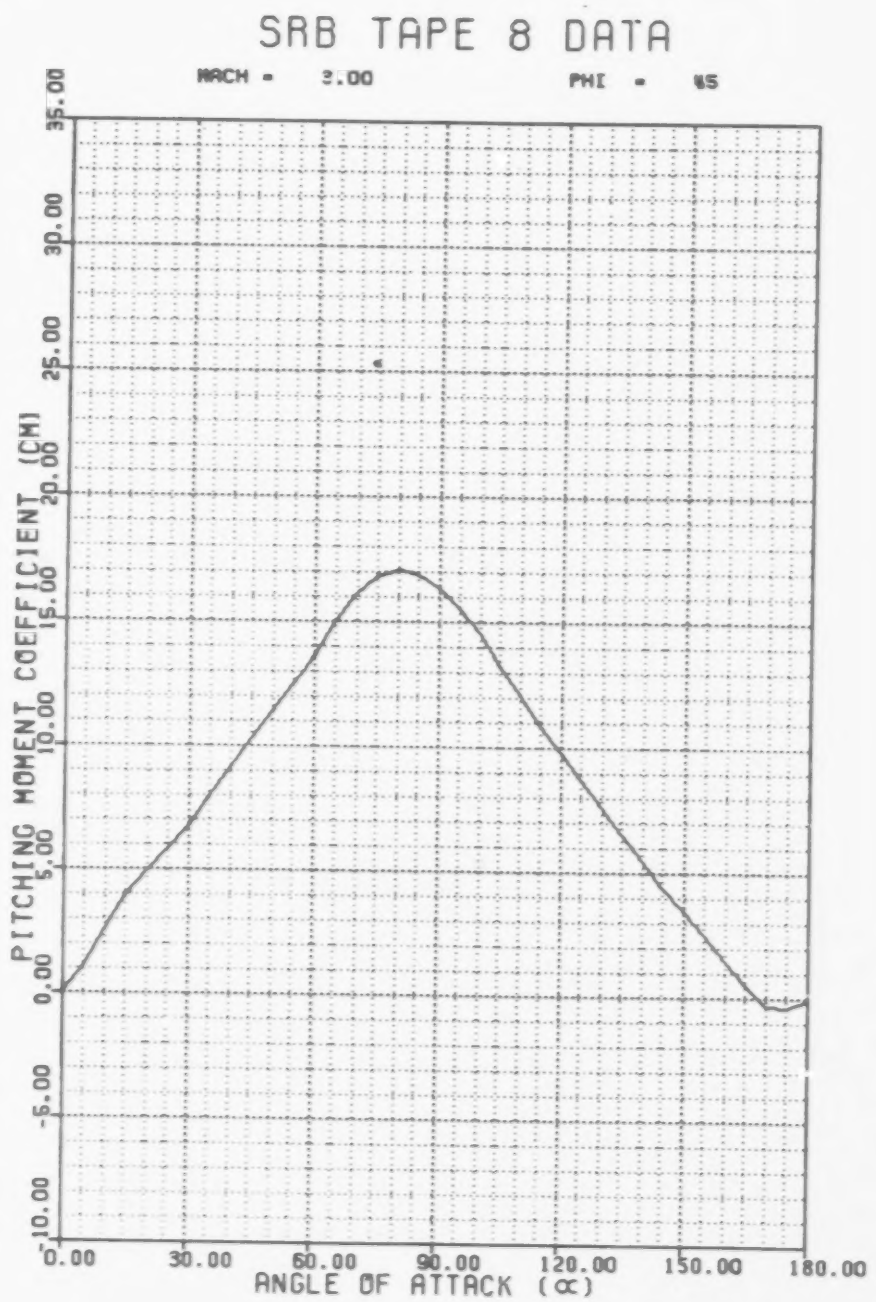
ANGLE OF ATTACK (α)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0.00
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60.00
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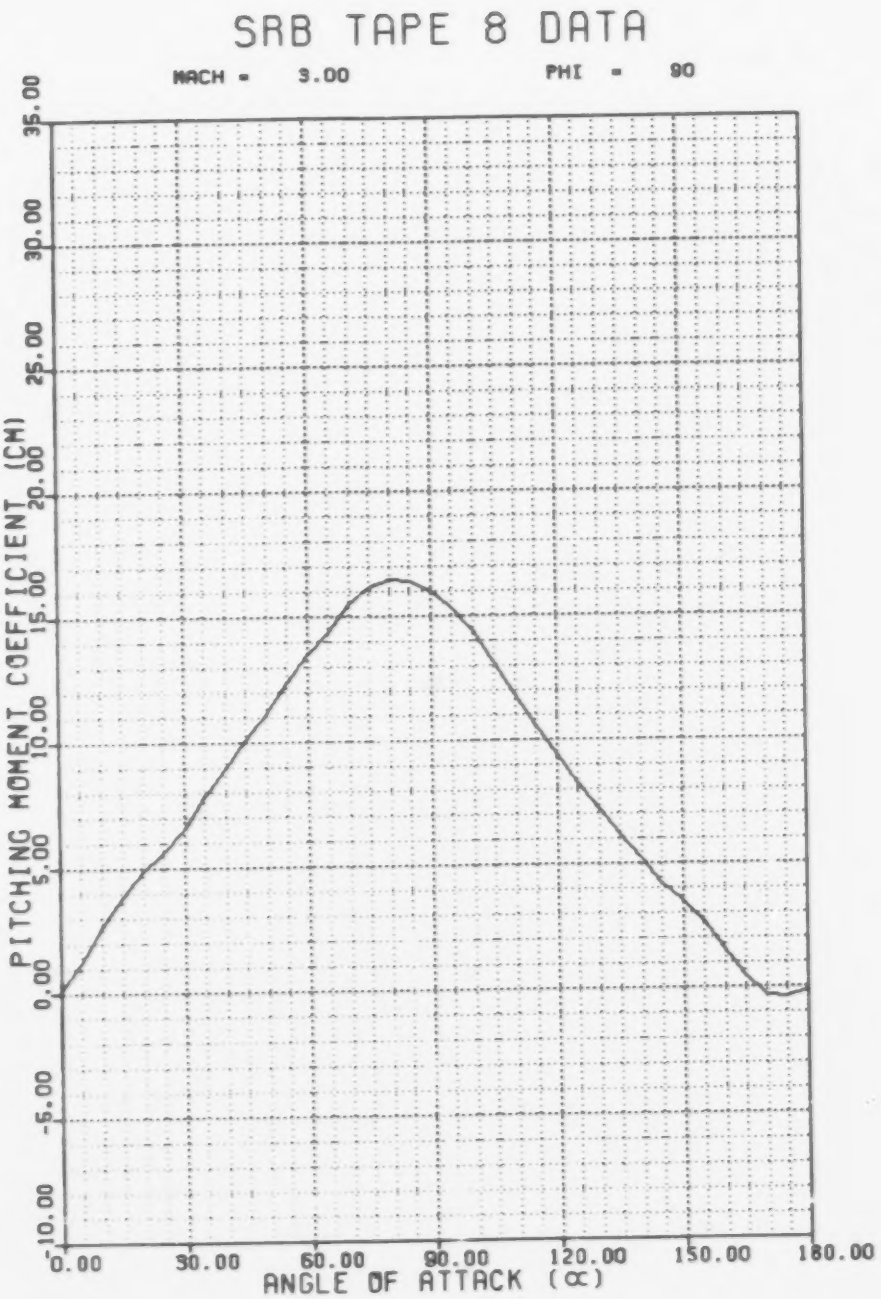
ANGLE OF ATTACK (α)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0.00
30.00
60.00
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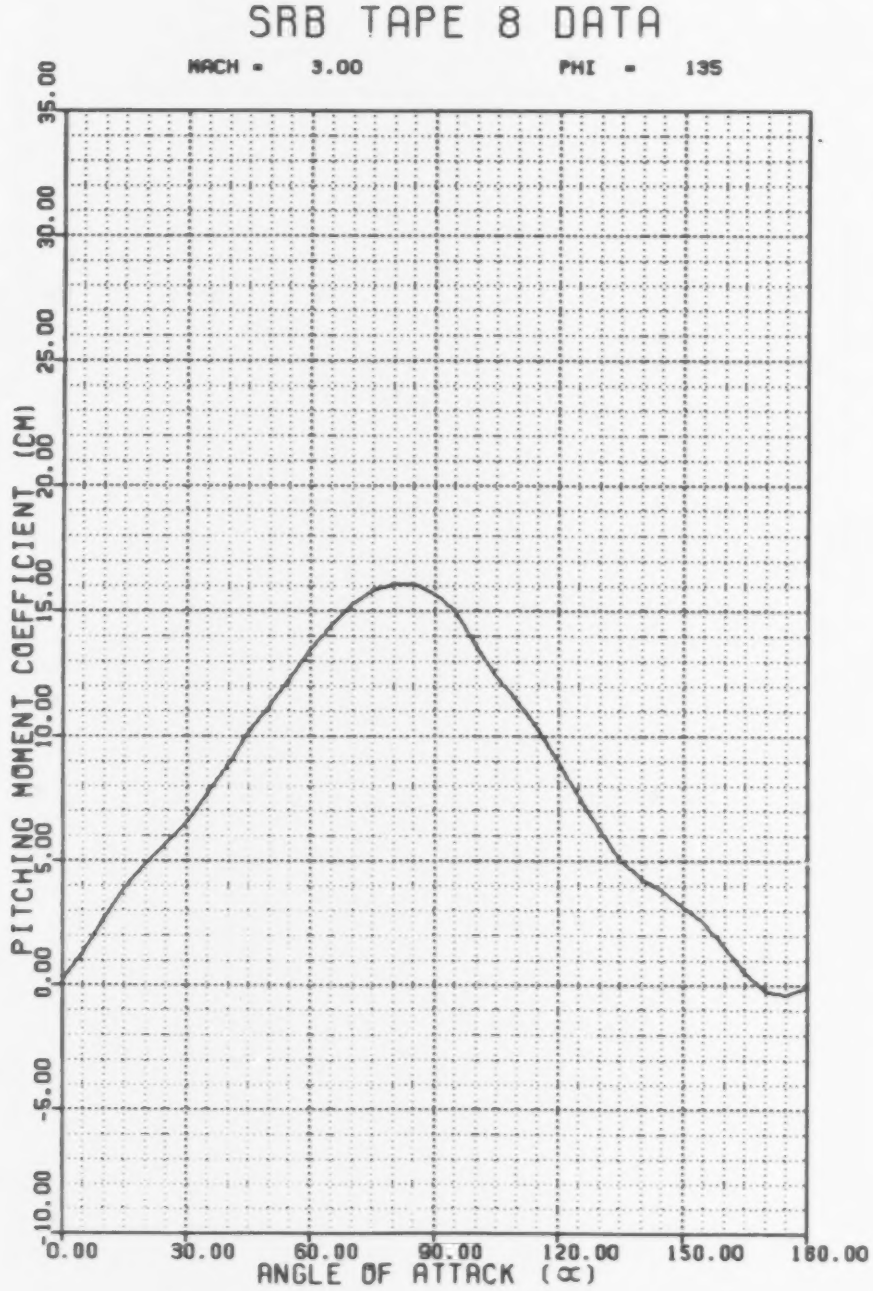
120.00
150.00
180.00
ANGLE OF ATTACK (α)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60.00
90.00
120.00
150.00
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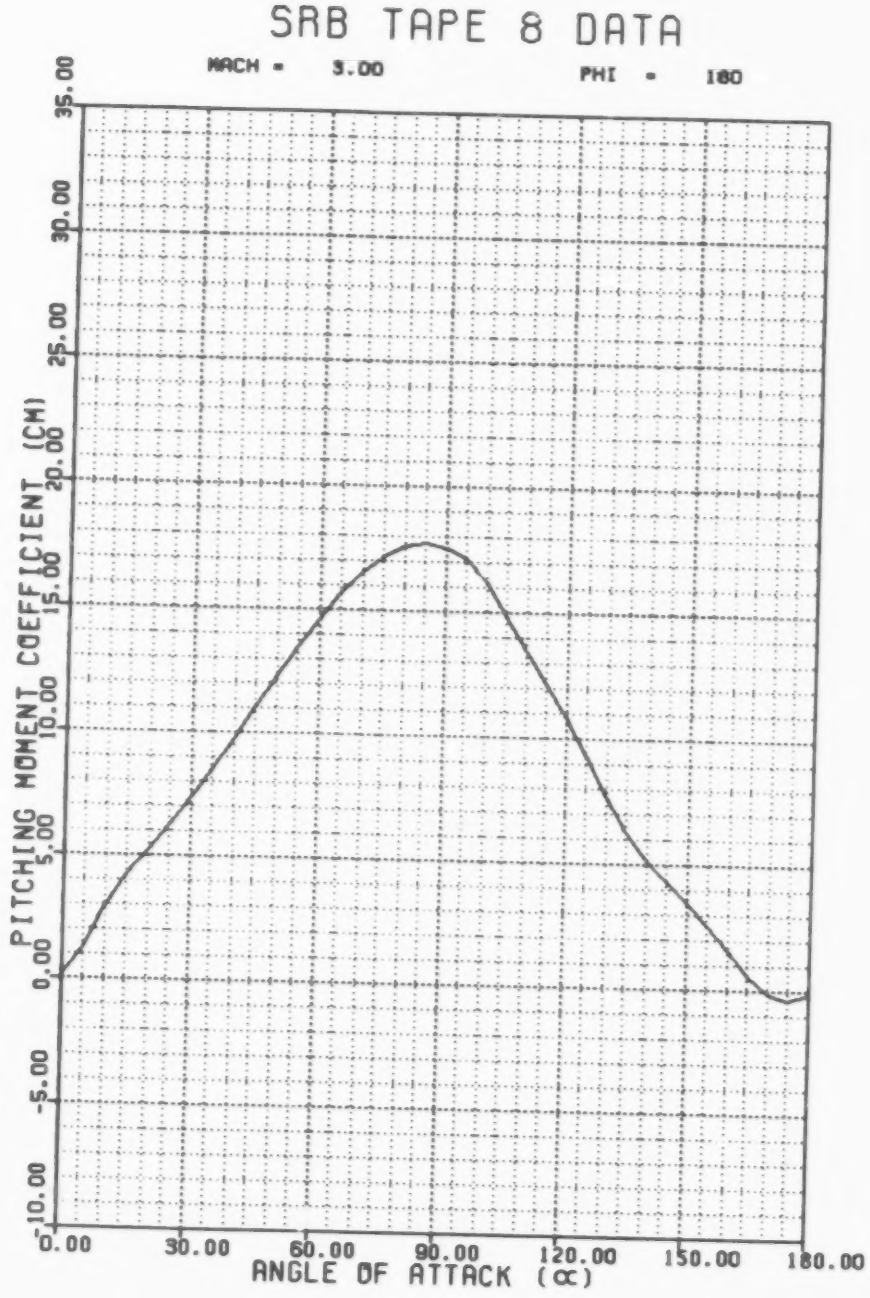
ANGLE OF ATTACK (α)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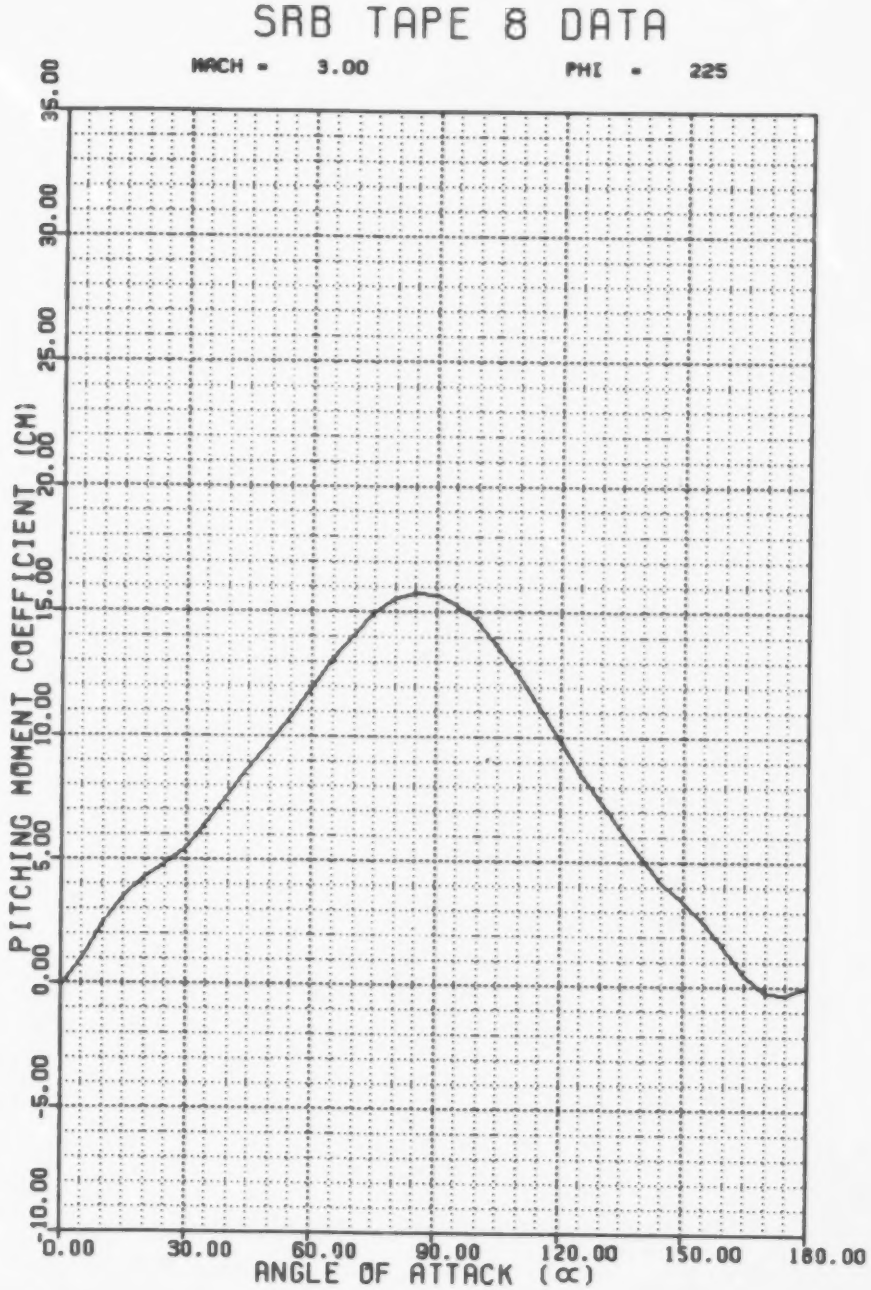
ANGLE OF ATTACK (α)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PHI = 225
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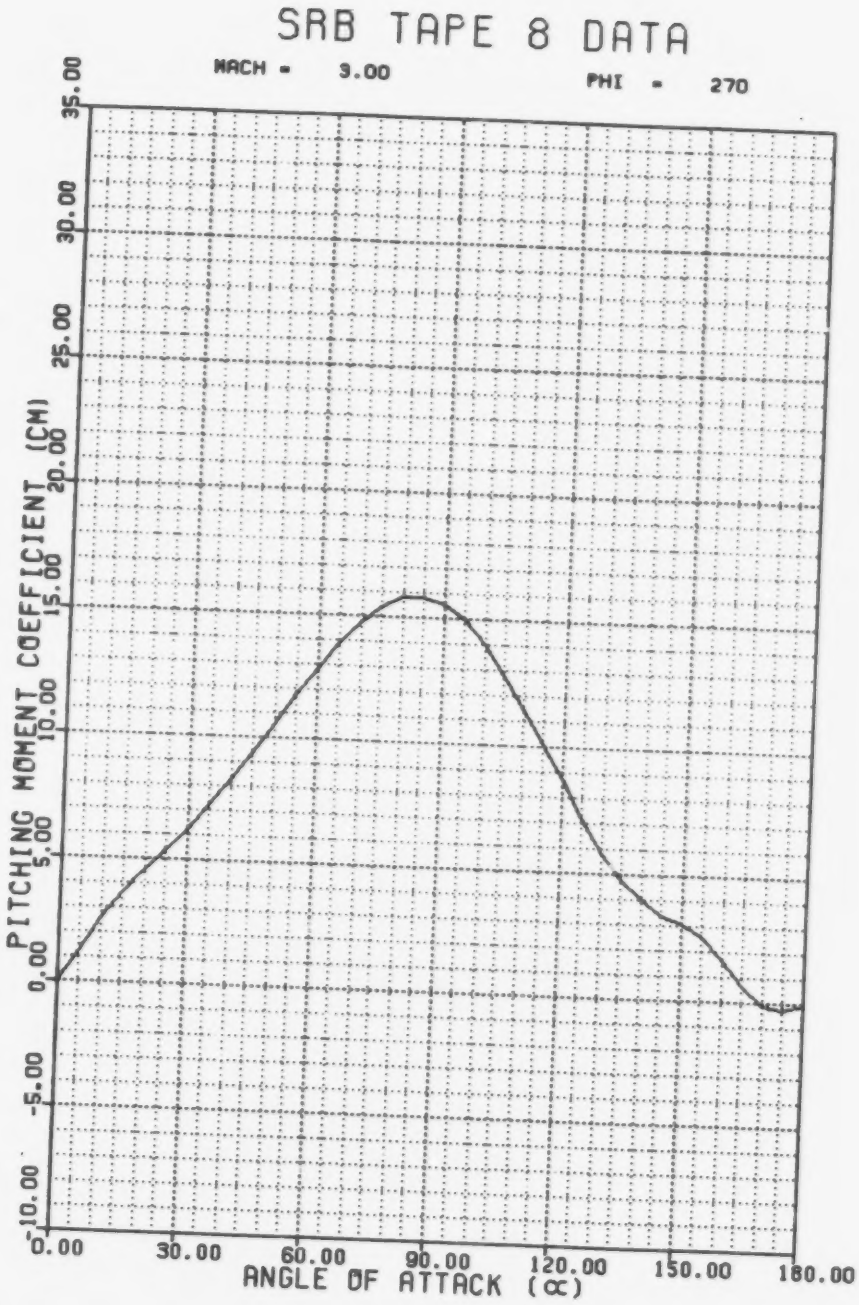
ANGLE OF ATTACK (α)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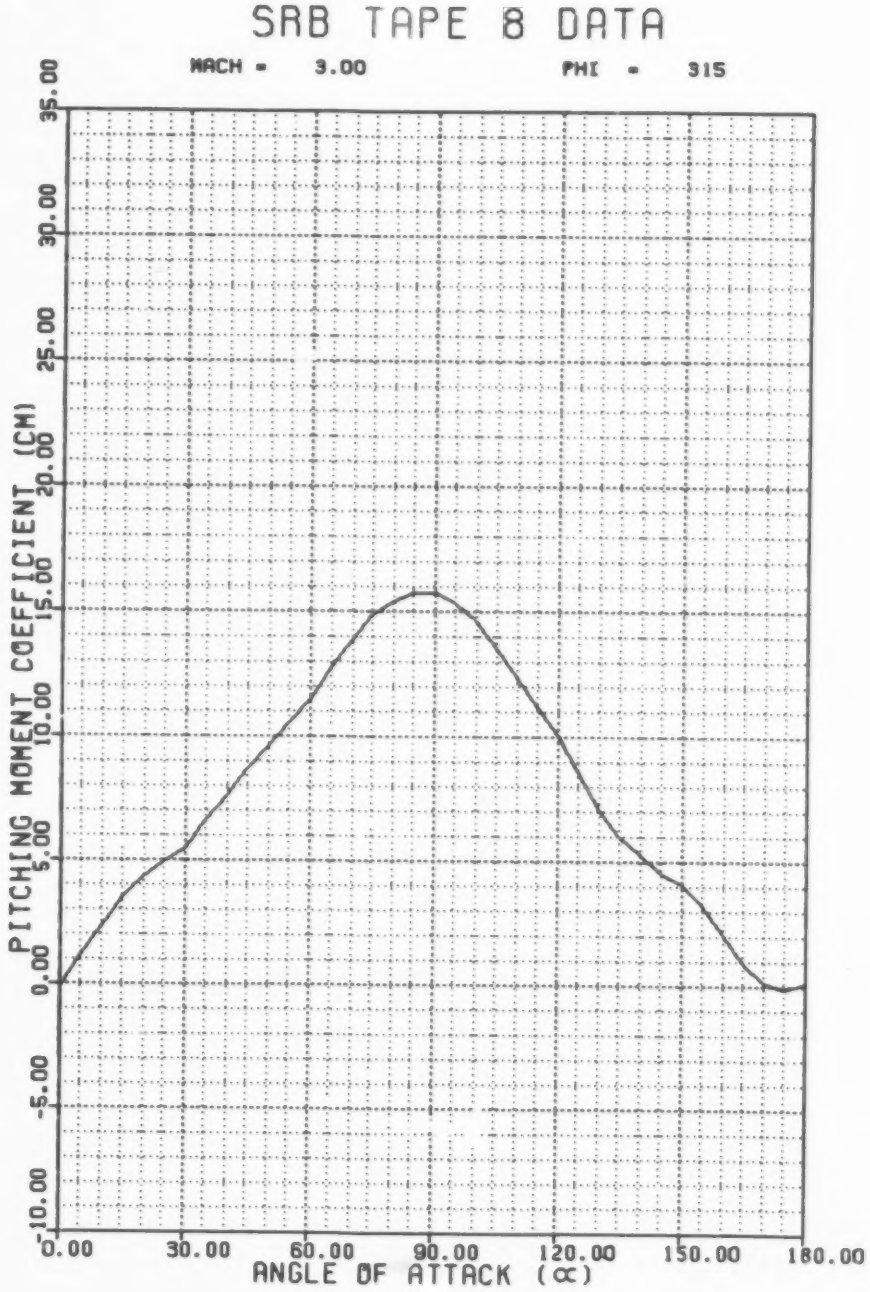
ANGLE OF ATTACK (α)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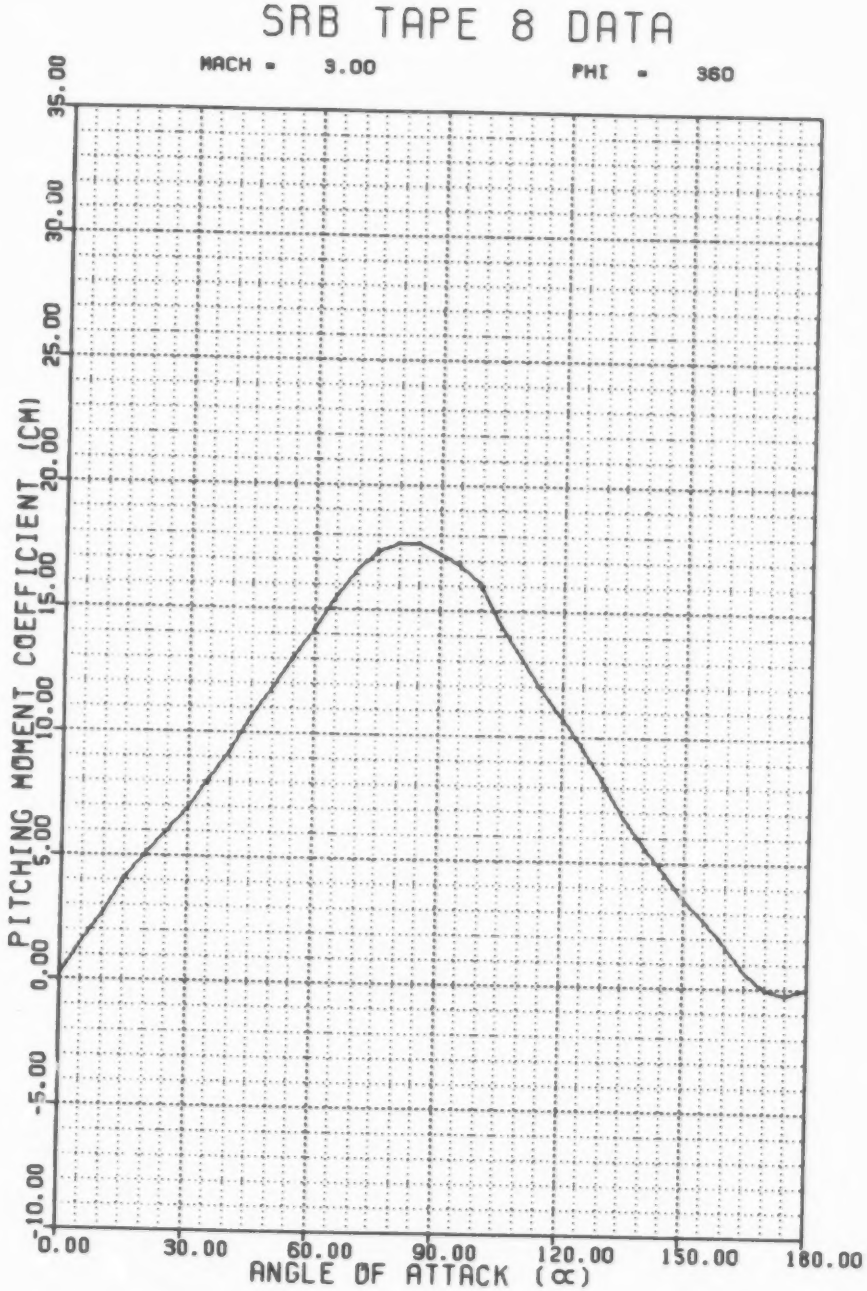
ANGLE OF ATTACK (α)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120.00
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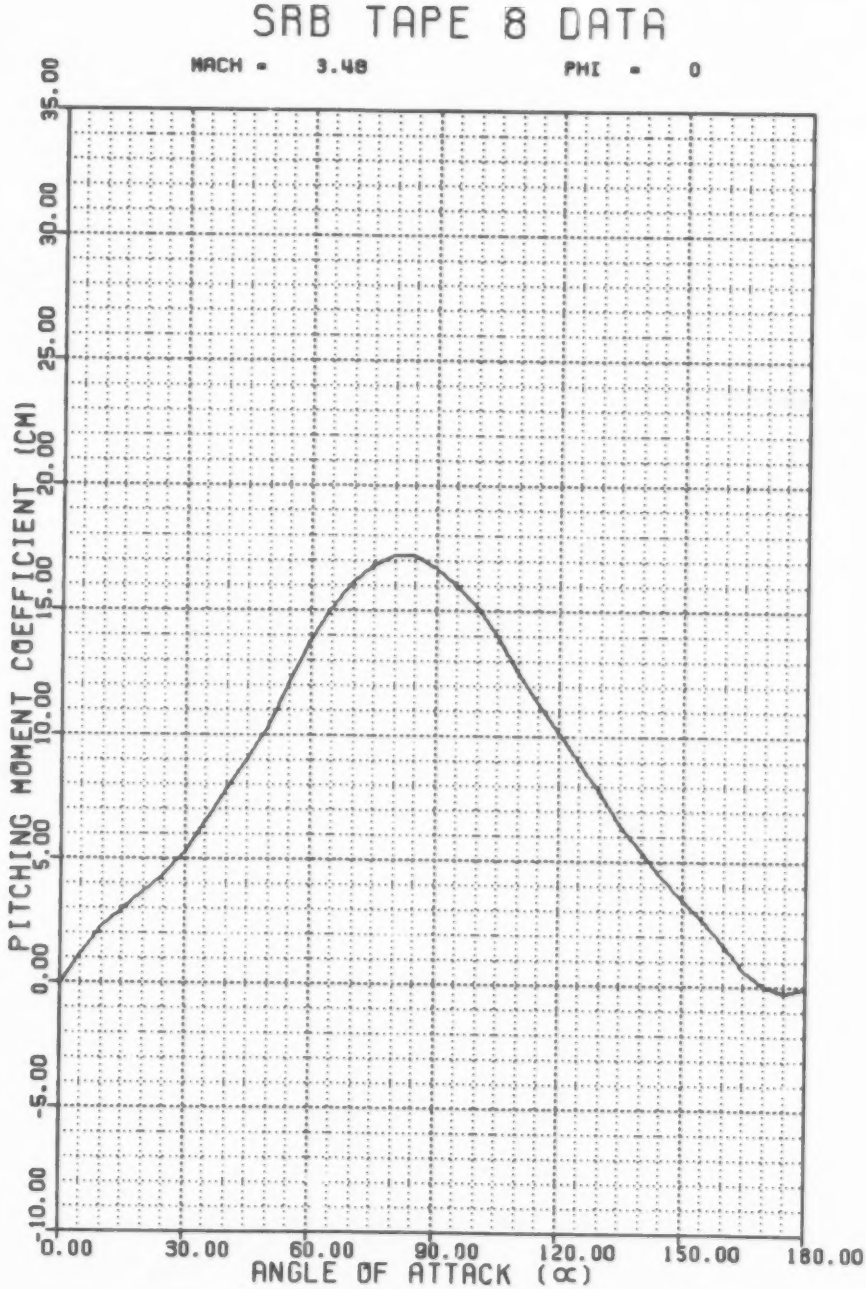
ANGLE OF ATTACK (α)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120.00
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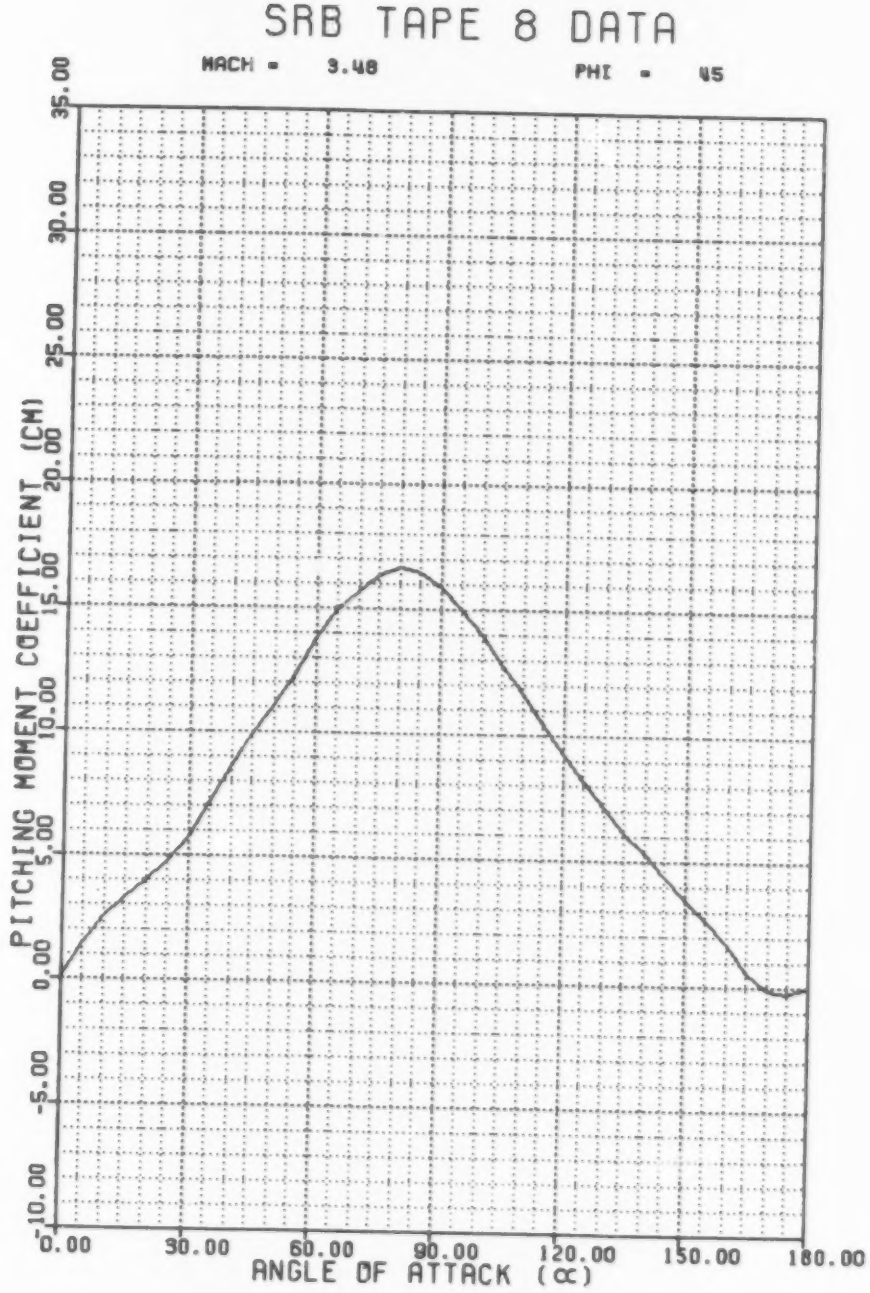
ANGLE OF ATTACK (α)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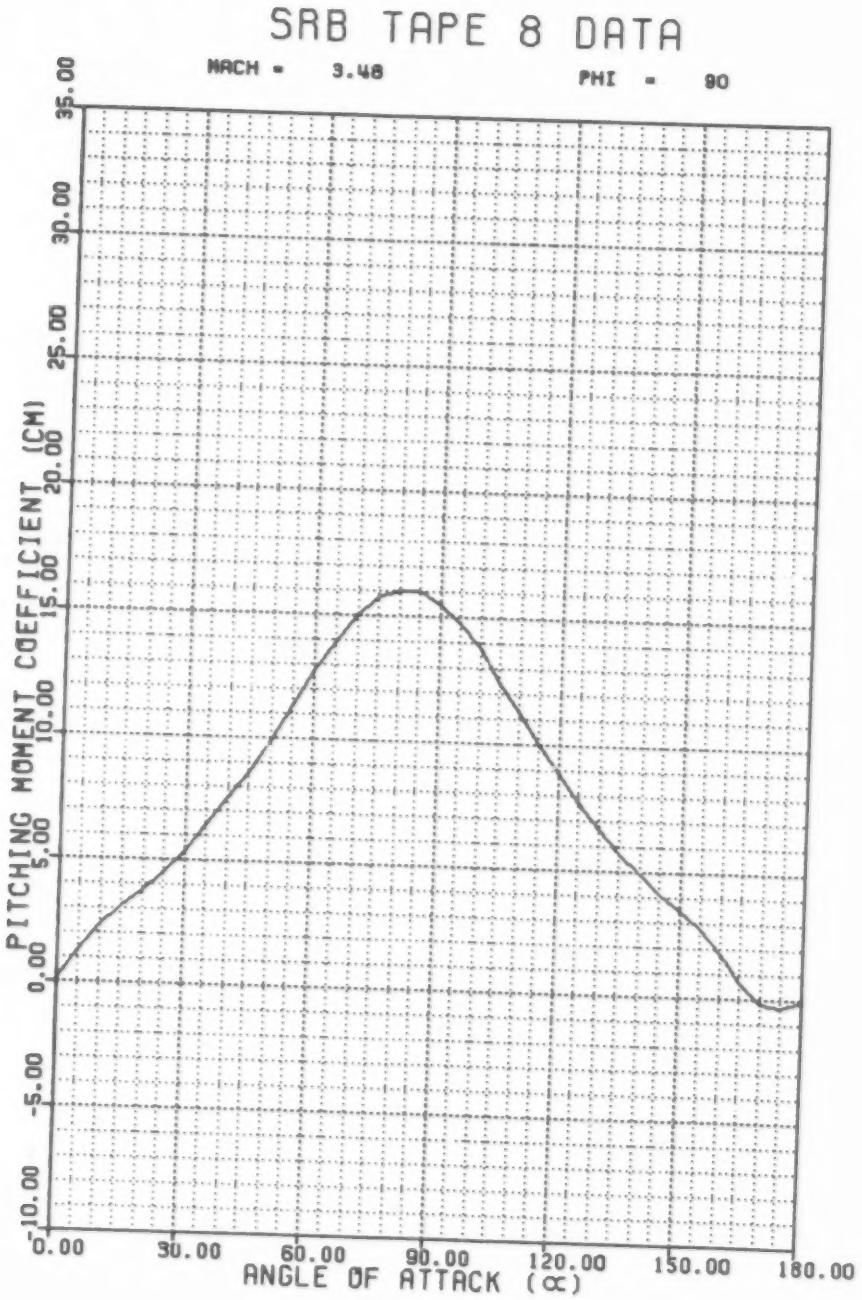
ANGLE OF ATTACK (α)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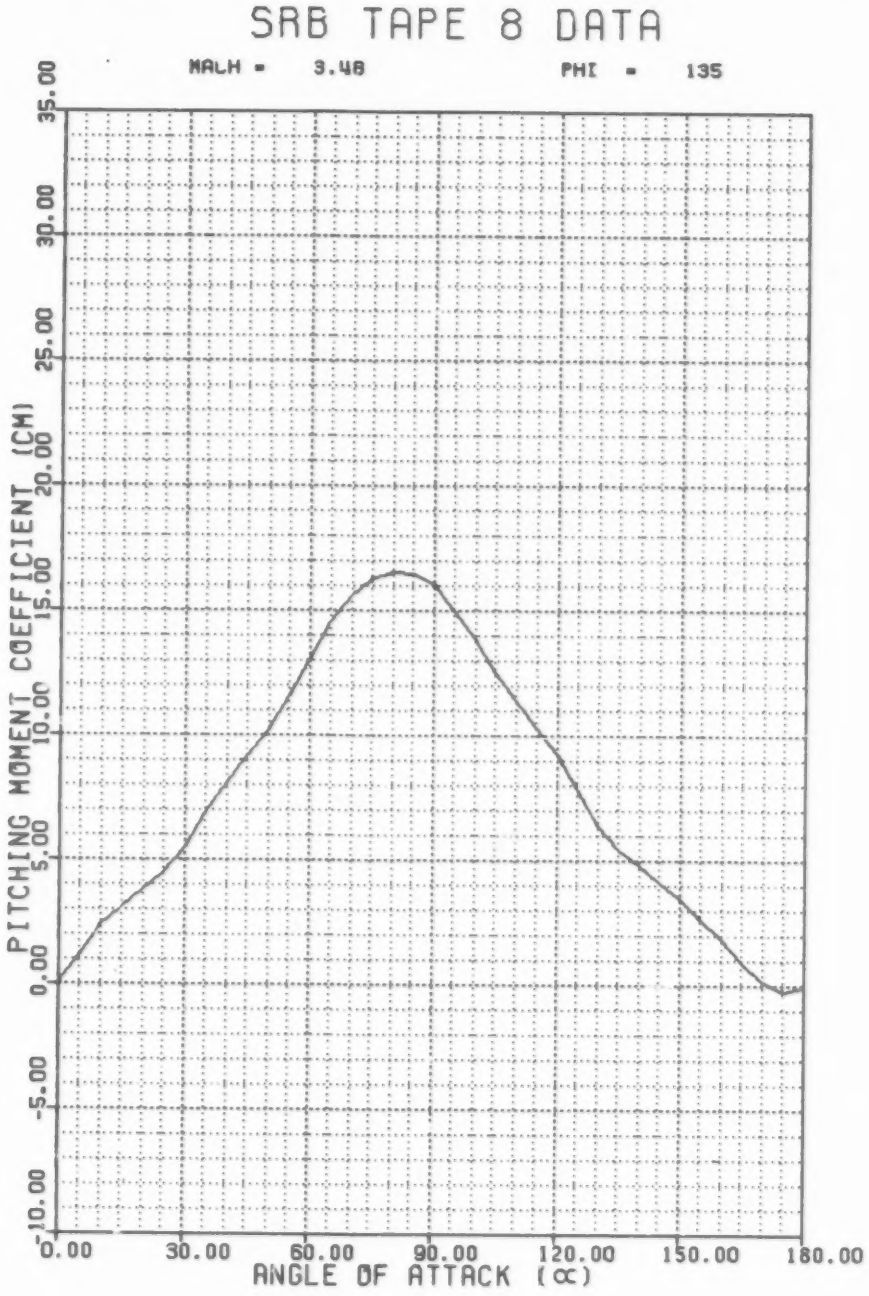
ANGLE OF ATTACK (α)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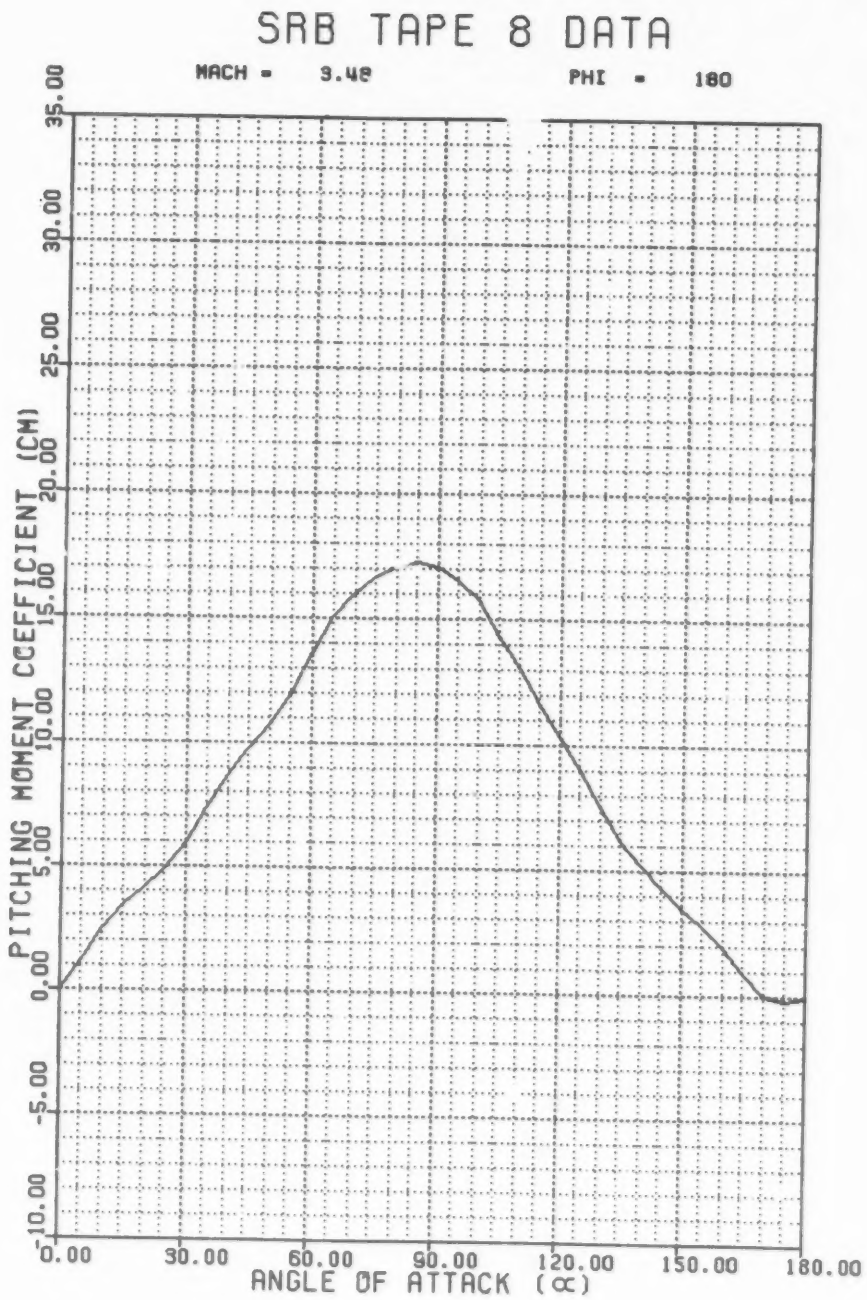
ANGLE OF ATTACK (α)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60.00
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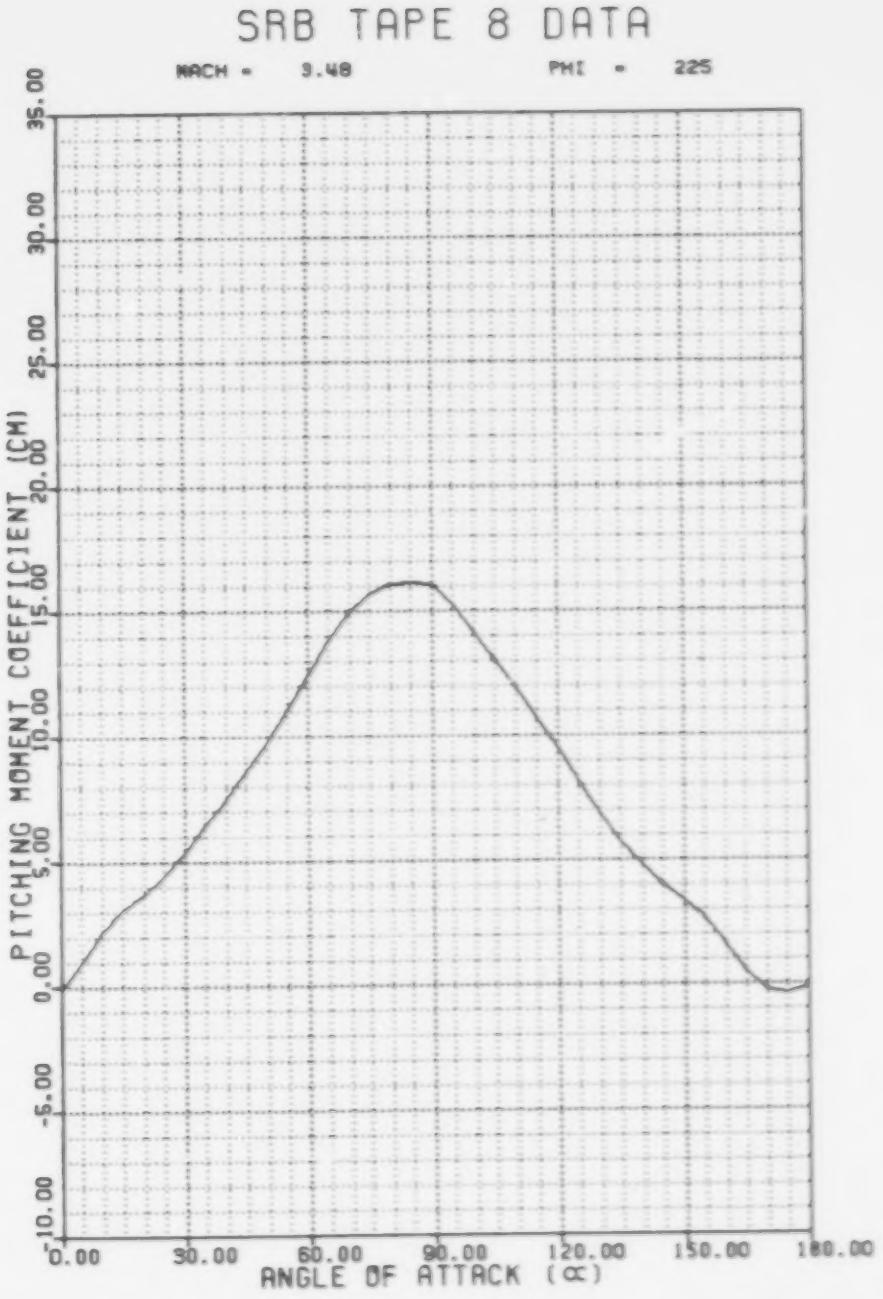
120.00
150.00
180.00
ANGLE OF ATTACK (α)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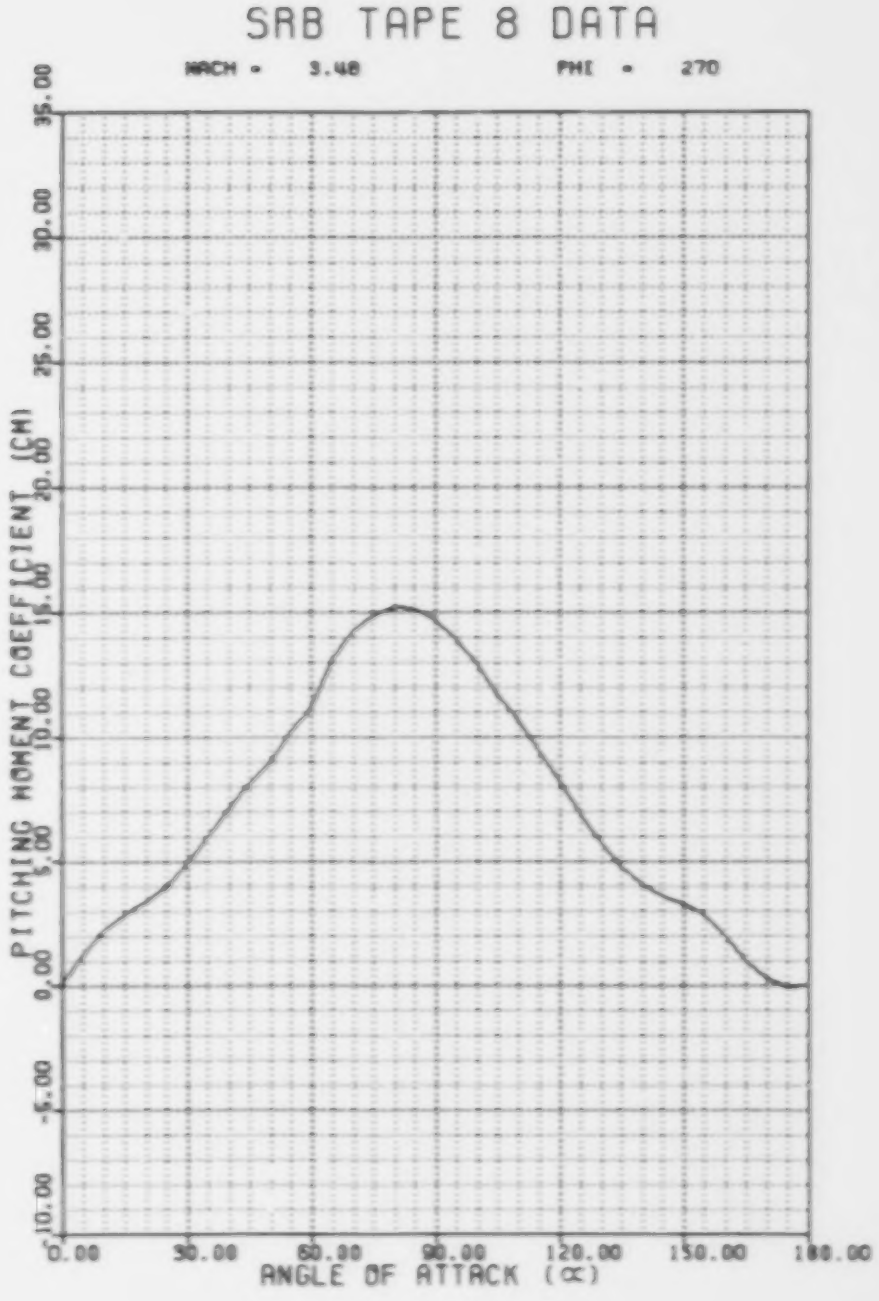
120.00
150.00
180.00
ANGLE OF ATTACK (α)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60.00
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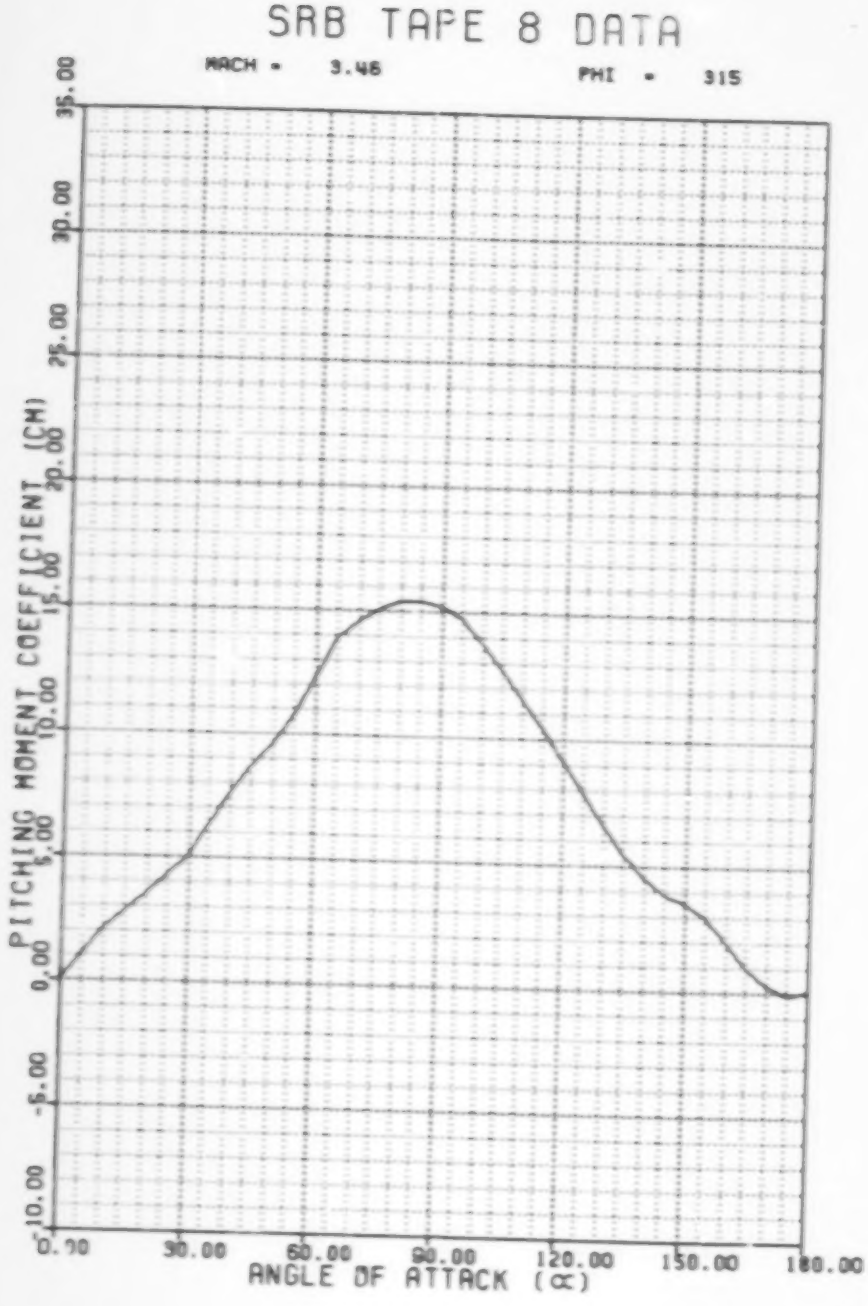
180.00
ANGLE OF ATTACK (α)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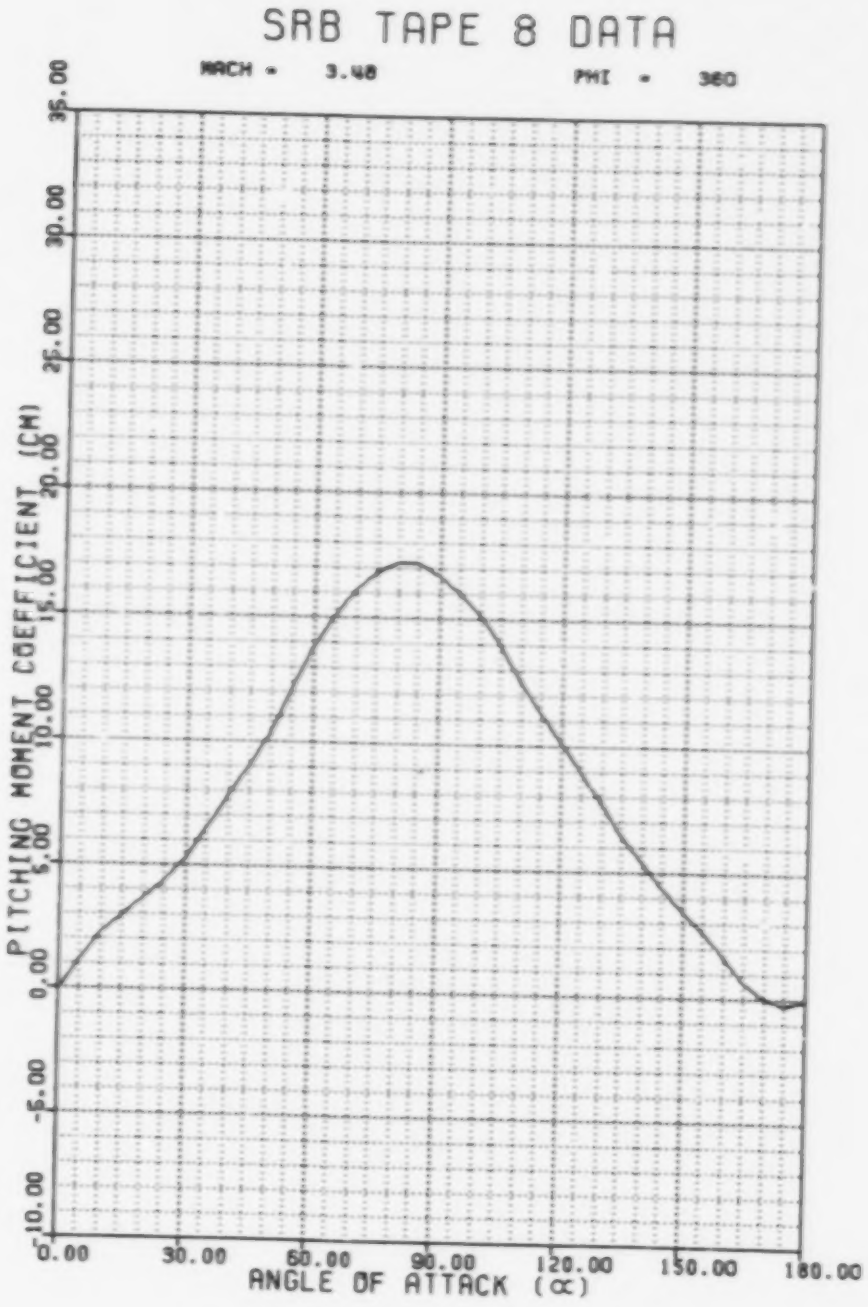
ANGLE OF ATTACK (α)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10.00
5.00
0.00
-5.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SIDE FORCE (CY)

Mach Number	Page
0.4	B-289
0.5	B-298
0.55	B-307
0.6	B-316
0.7	B-325
0.8	B-334
0.9	B-343
0.95	B-352
1.05	B-361
1.1	B-370
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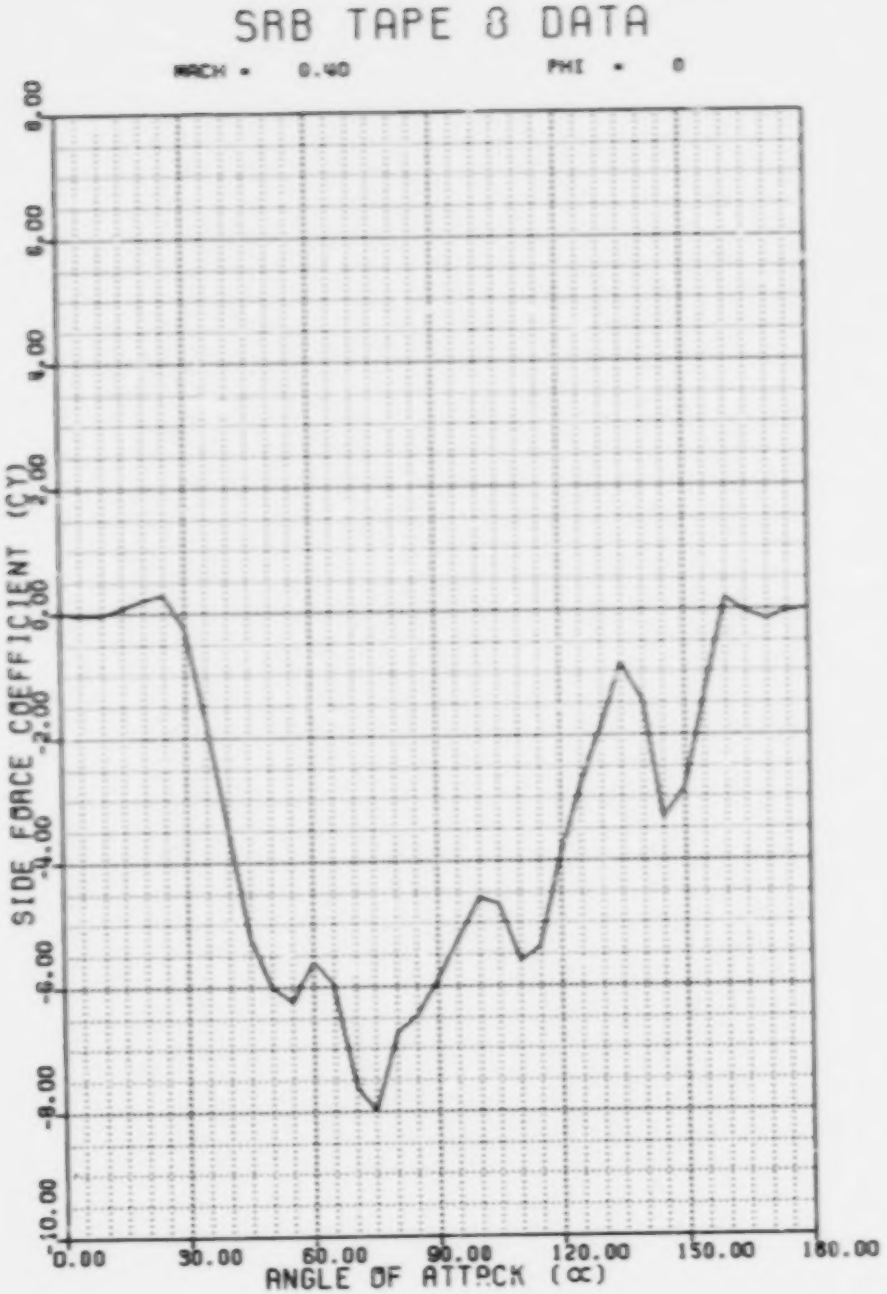
1.4	B-388
1.96	B-397
2.5	B-406
3.0	B-415
3.48	B-424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-4.00
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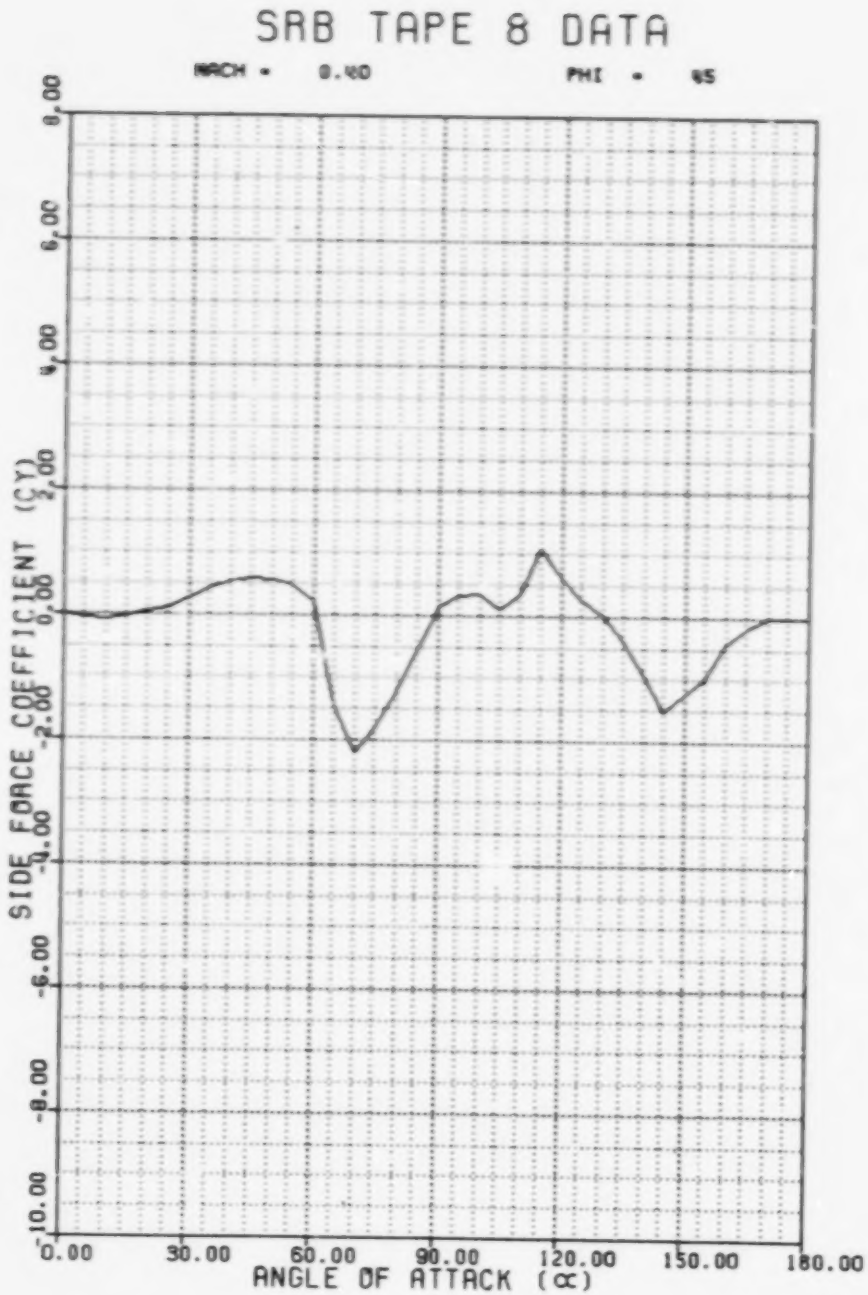
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI • 65
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2.00
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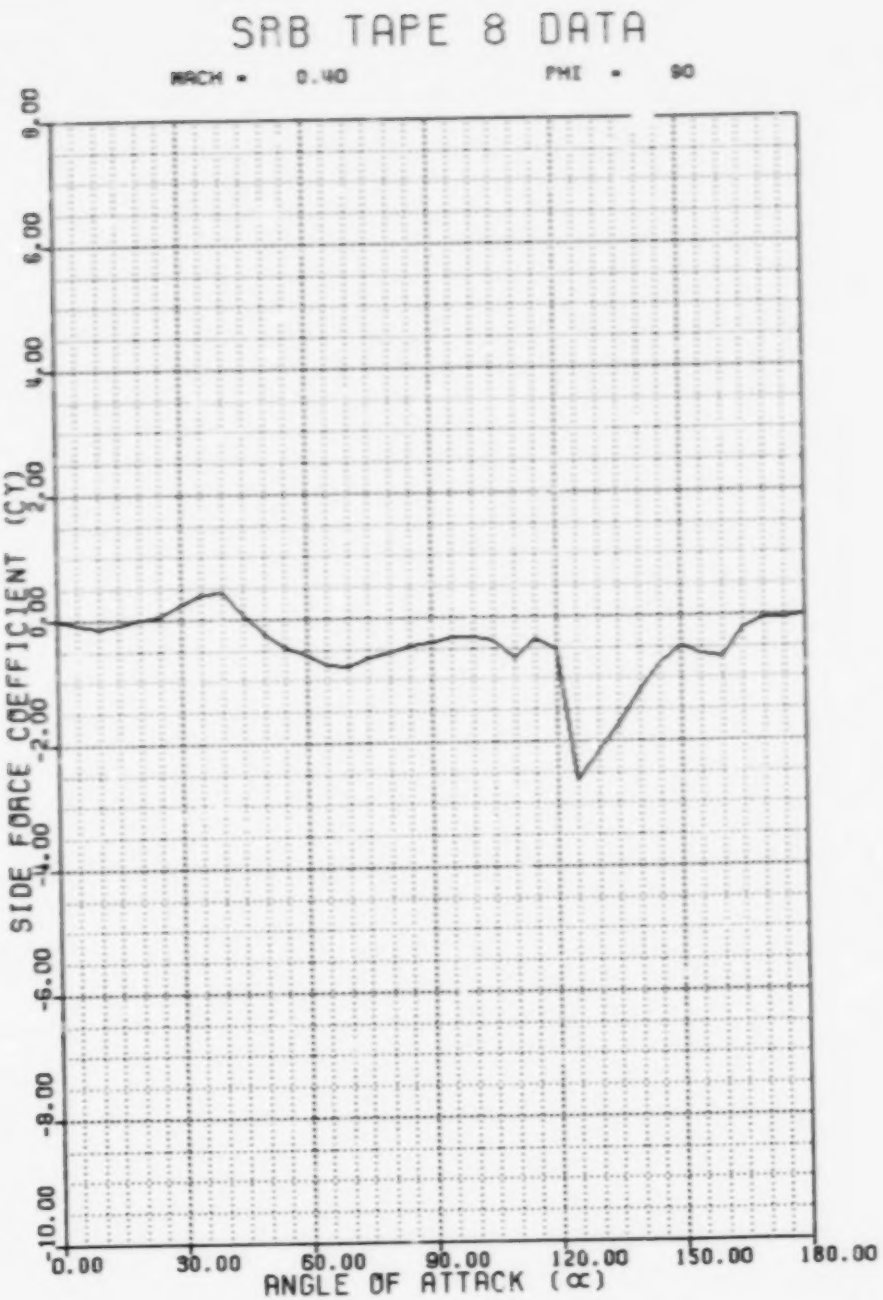
180.00
ANGLE OF ATTACK (α)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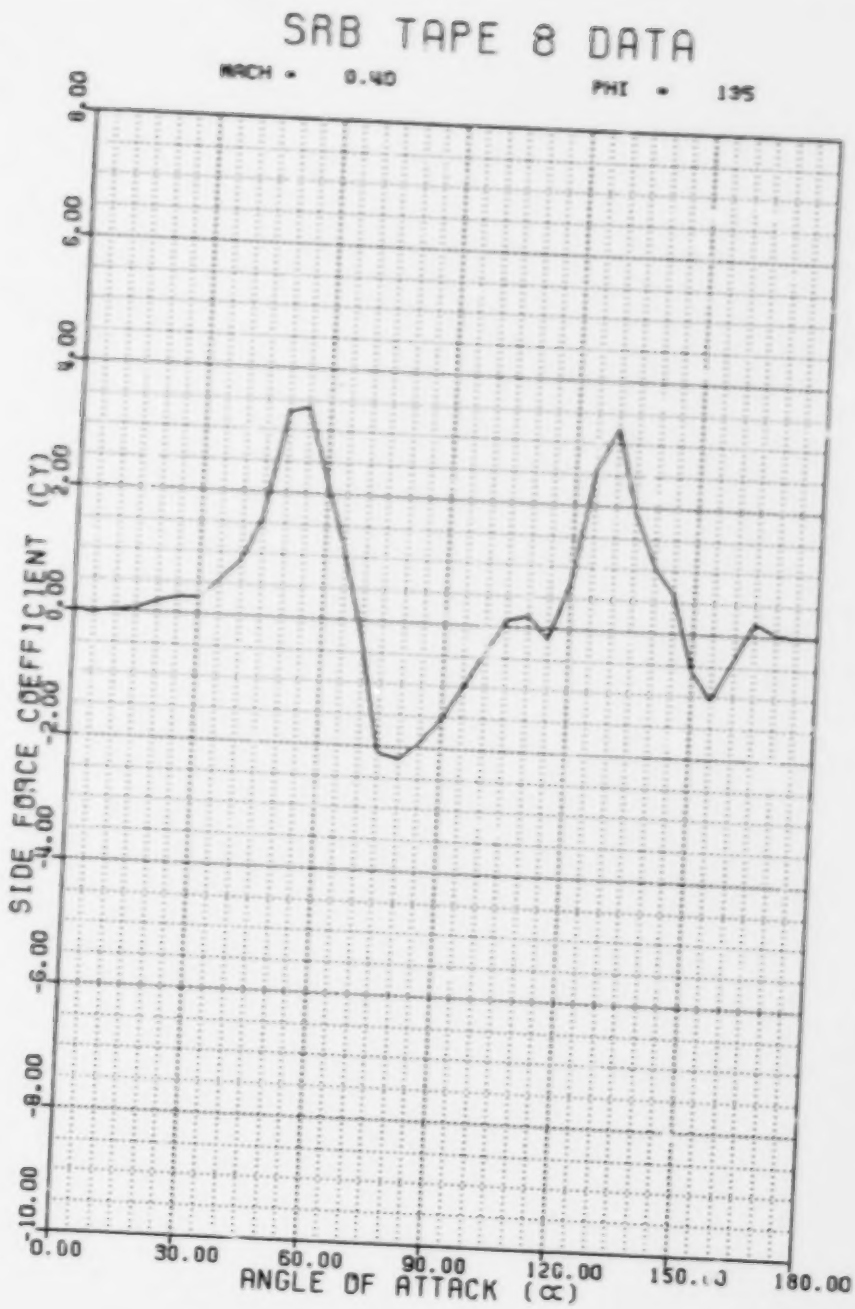
150.00
180.00
ANGLE OF ATTACK (α)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90.00
120.00
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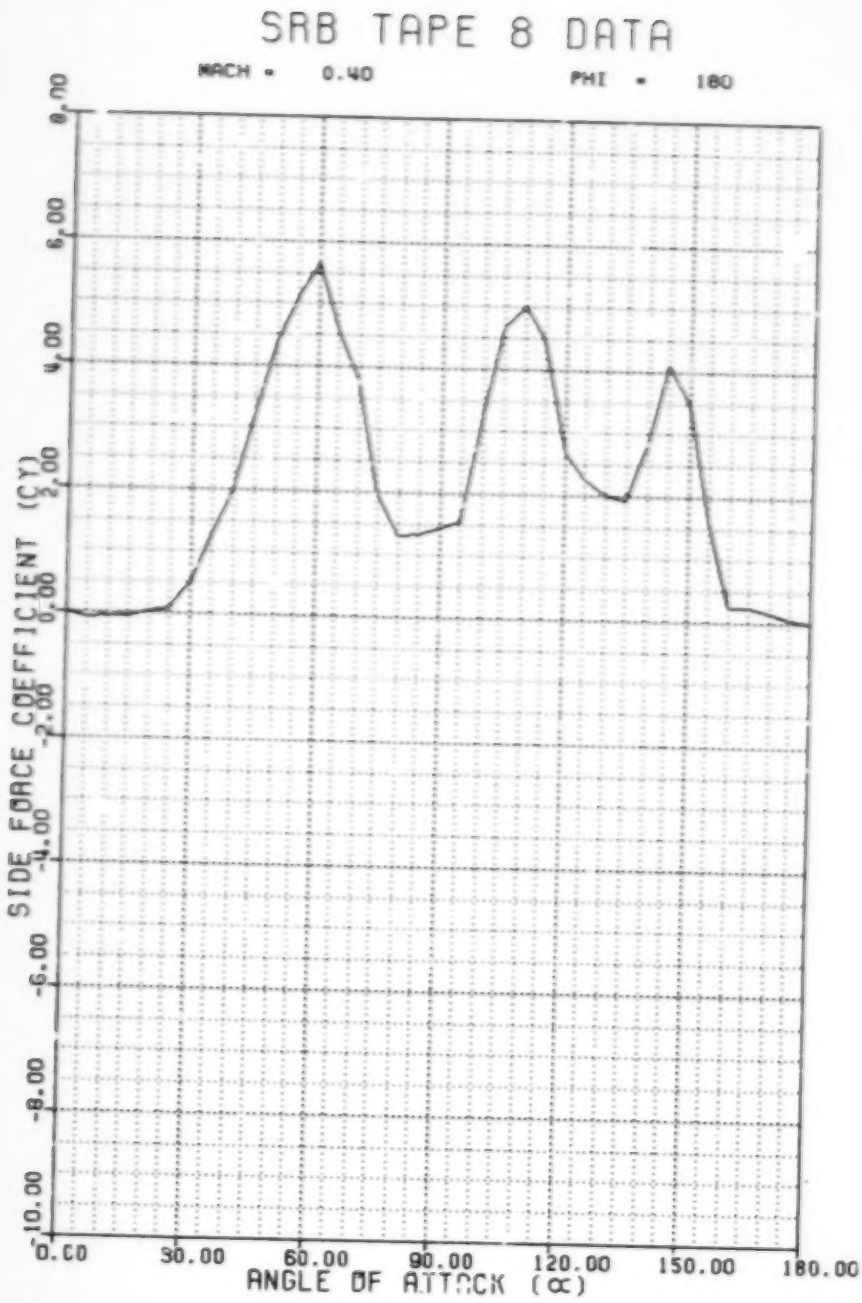
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 180
SIDE FORCE COEFFICIENT (CY)
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2.00
0.00
-2.00
-4.00
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0.00
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60.00
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120.00
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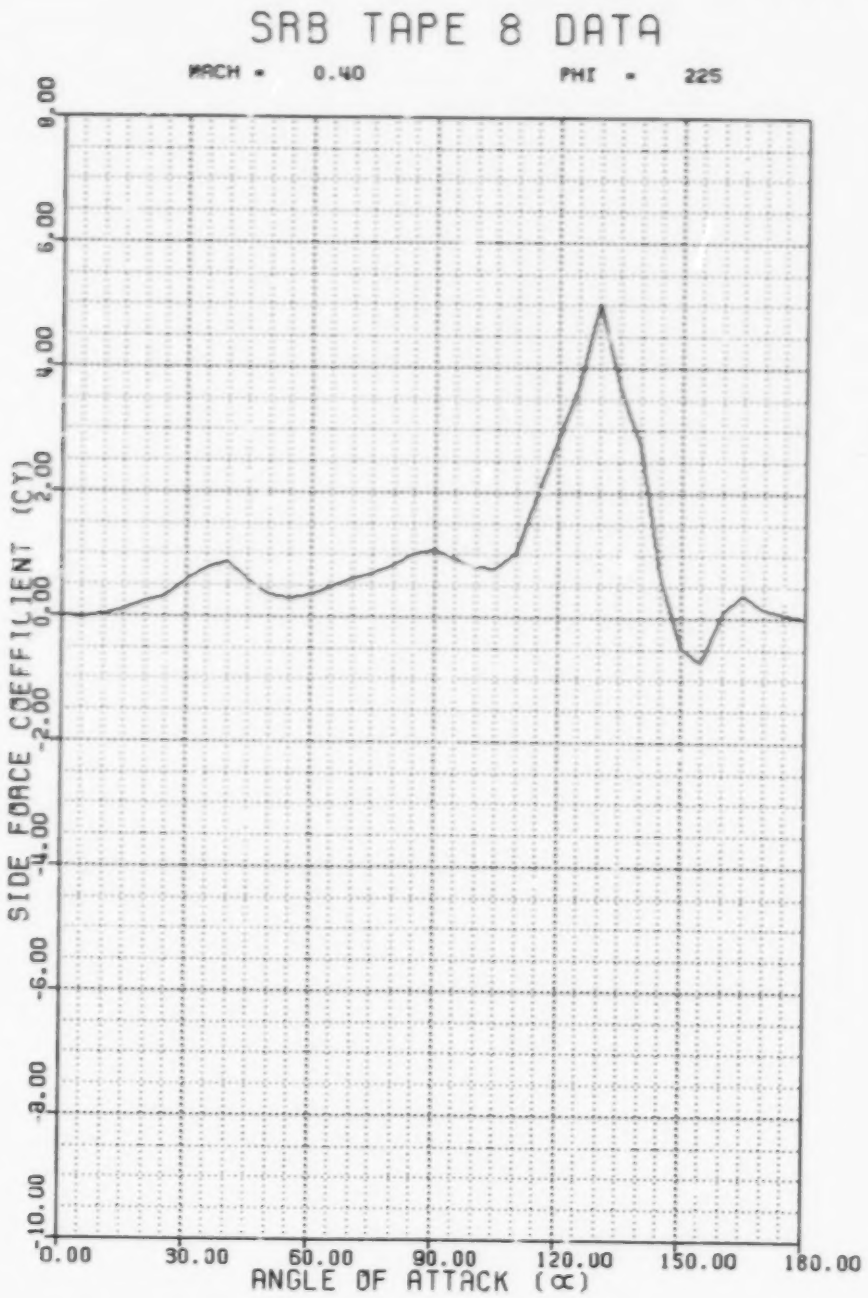
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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2.00
0.00
-2.00
-4.00
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0.00
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120.00
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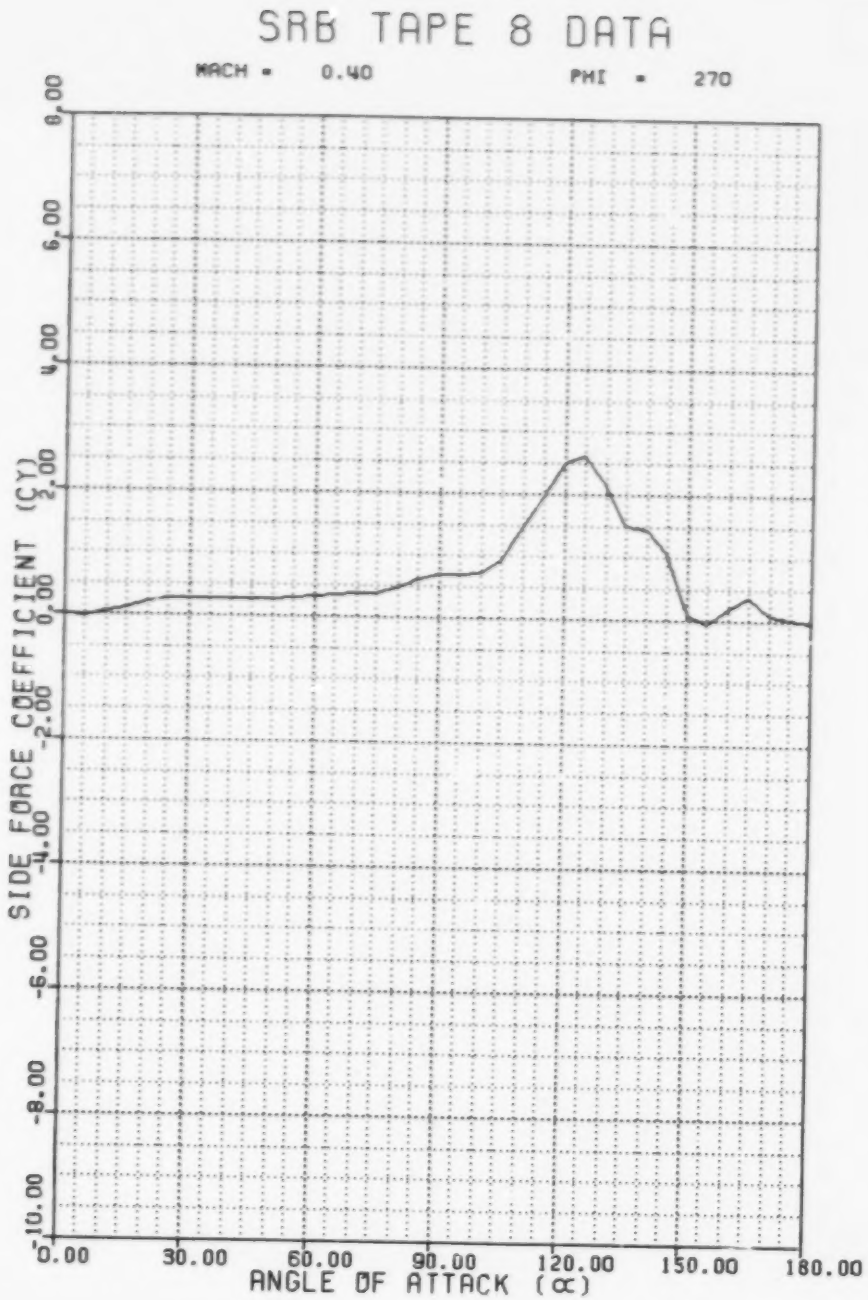
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
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2.00
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-2.00
-4.00
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60.00
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120.00
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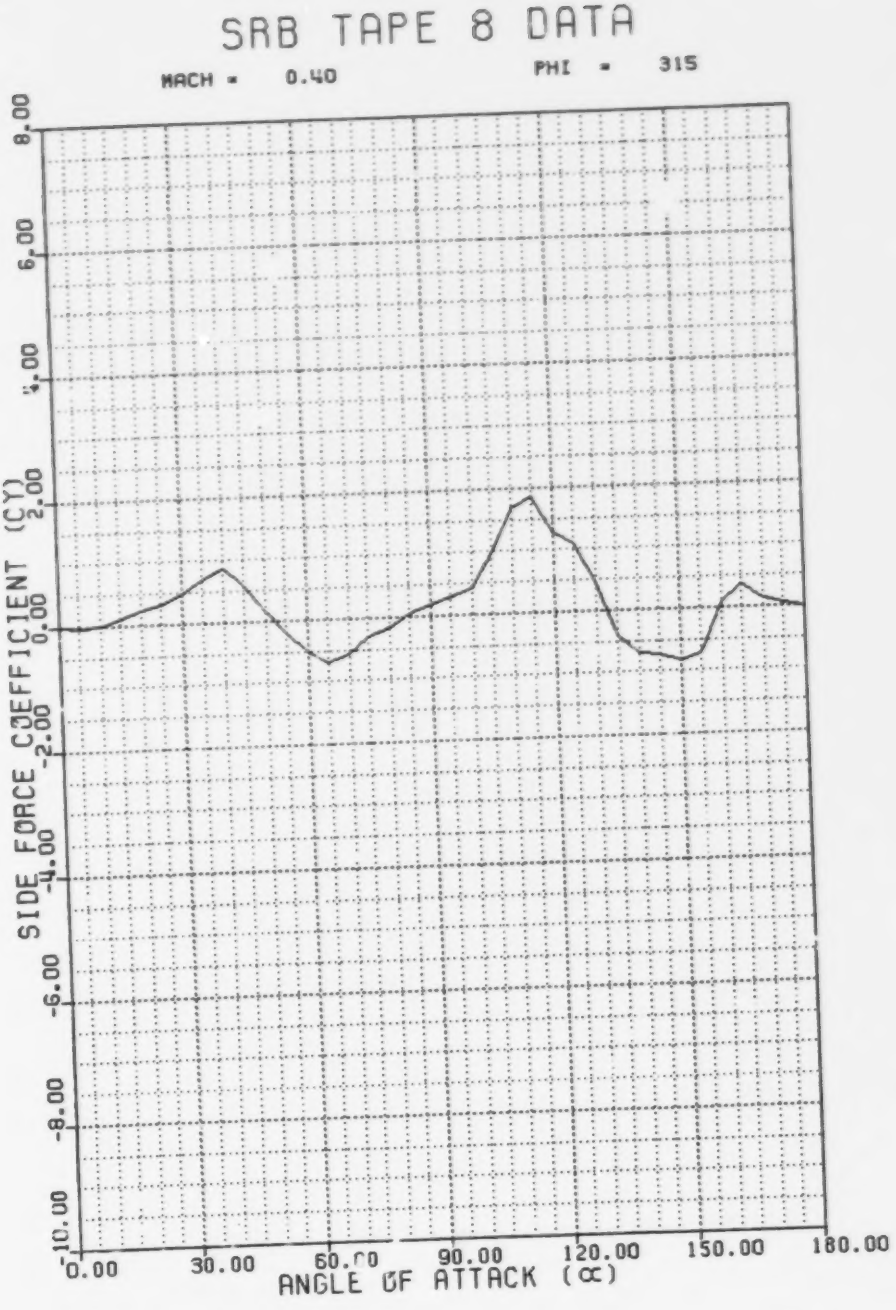
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 315
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0.00
-2.00
-4.00
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60.00
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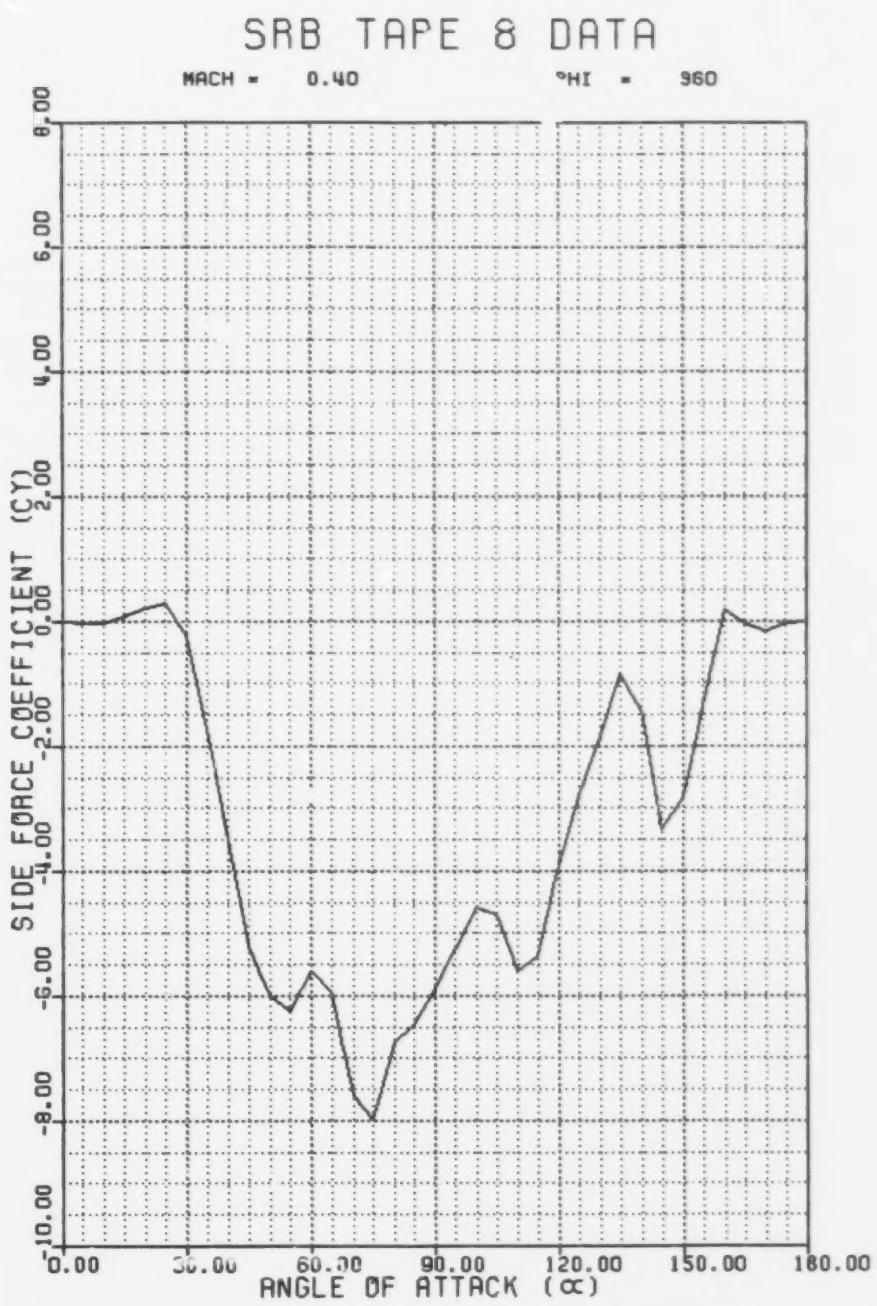
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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120.00
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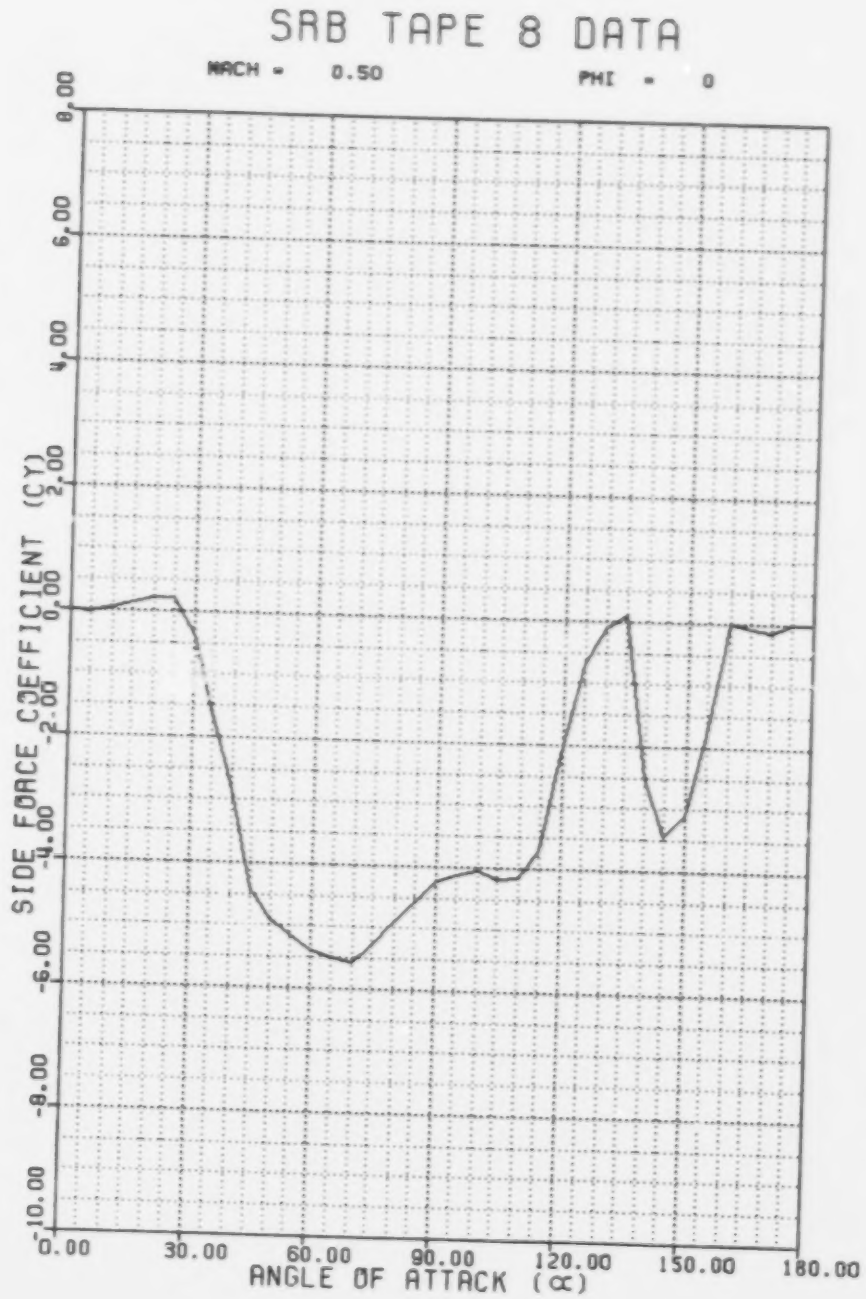
ANGLE OF ATTACK (α)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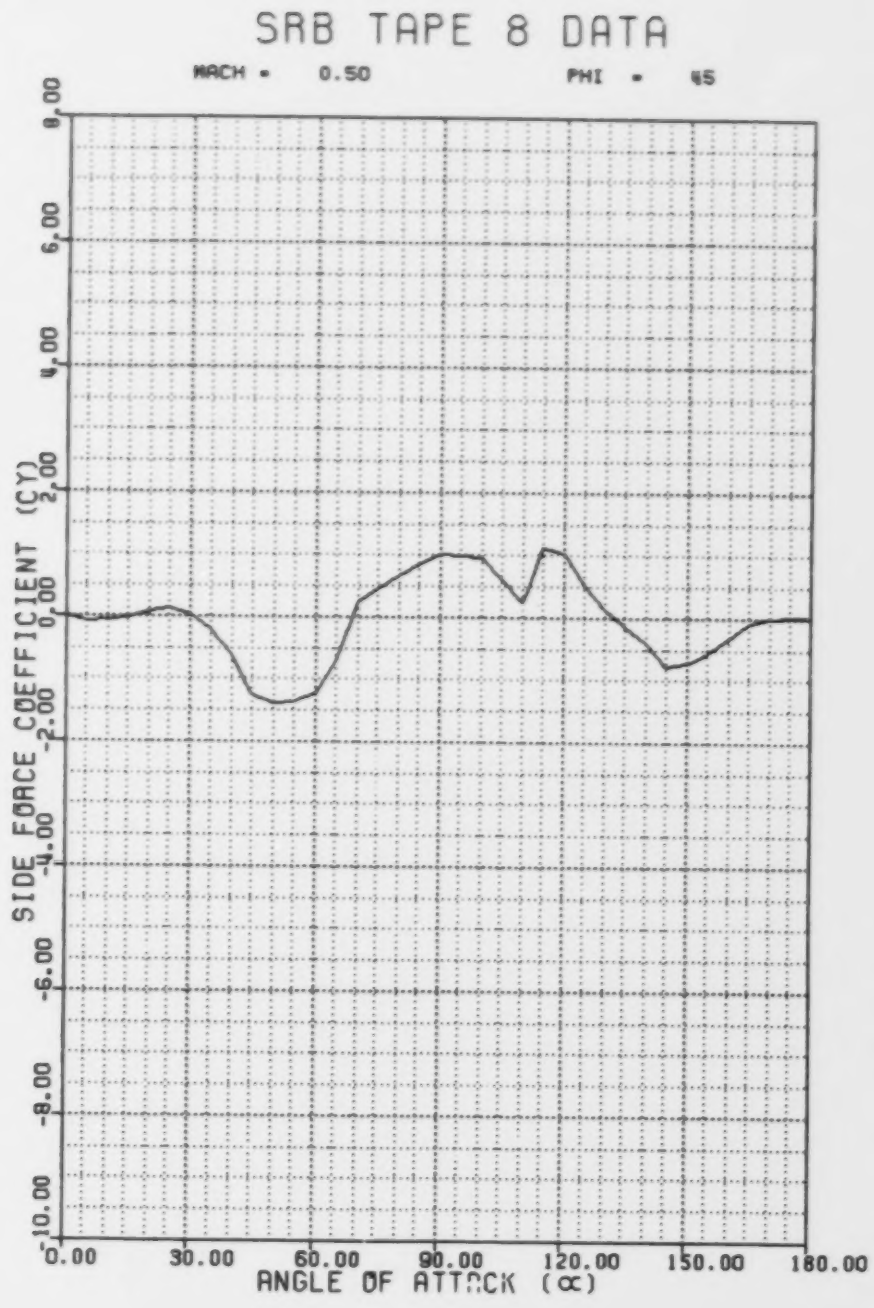
ANGLE OF ATTACK (α)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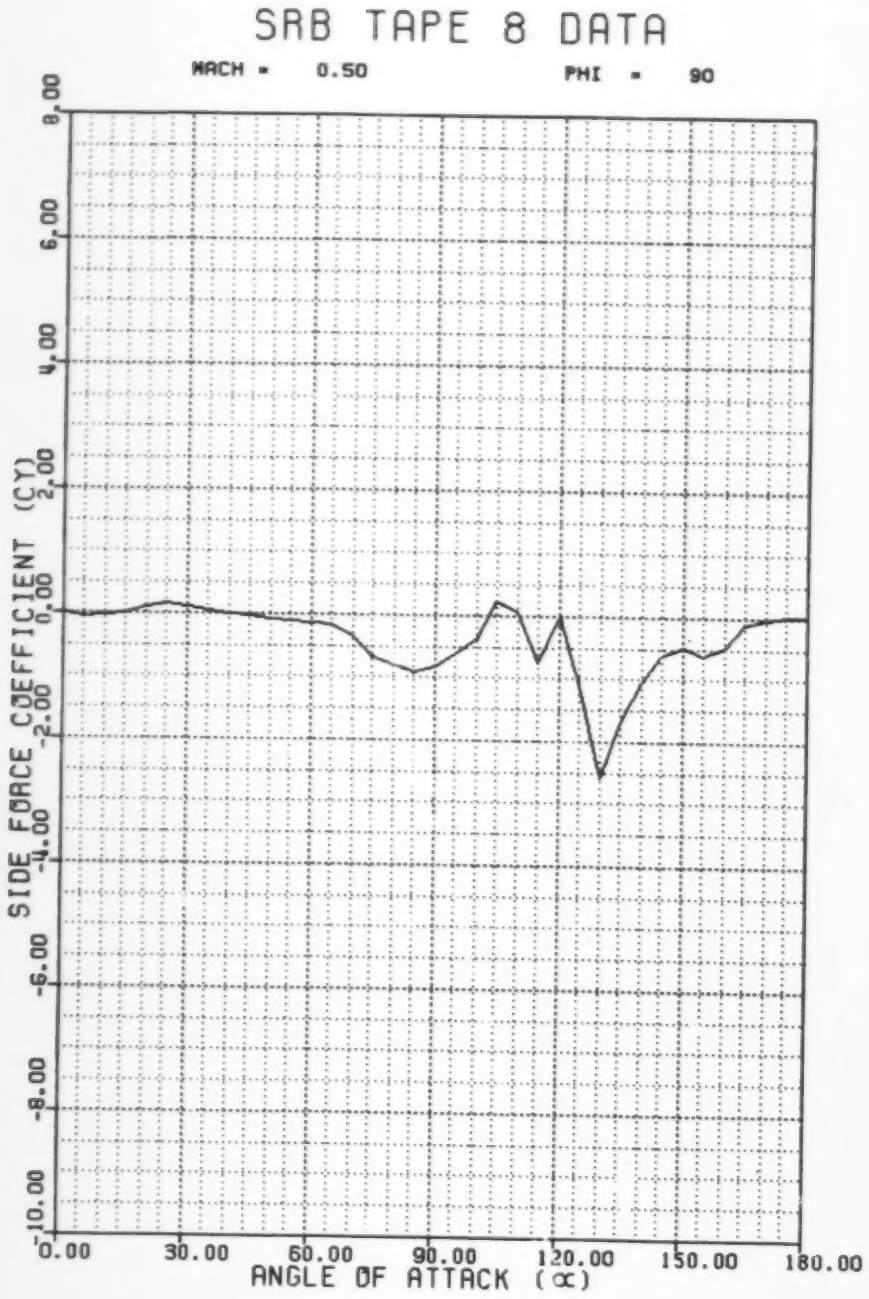
ANGLE OF ATTACK (α)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-2.00
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0.00
30.00
60.00
90.00
120.00
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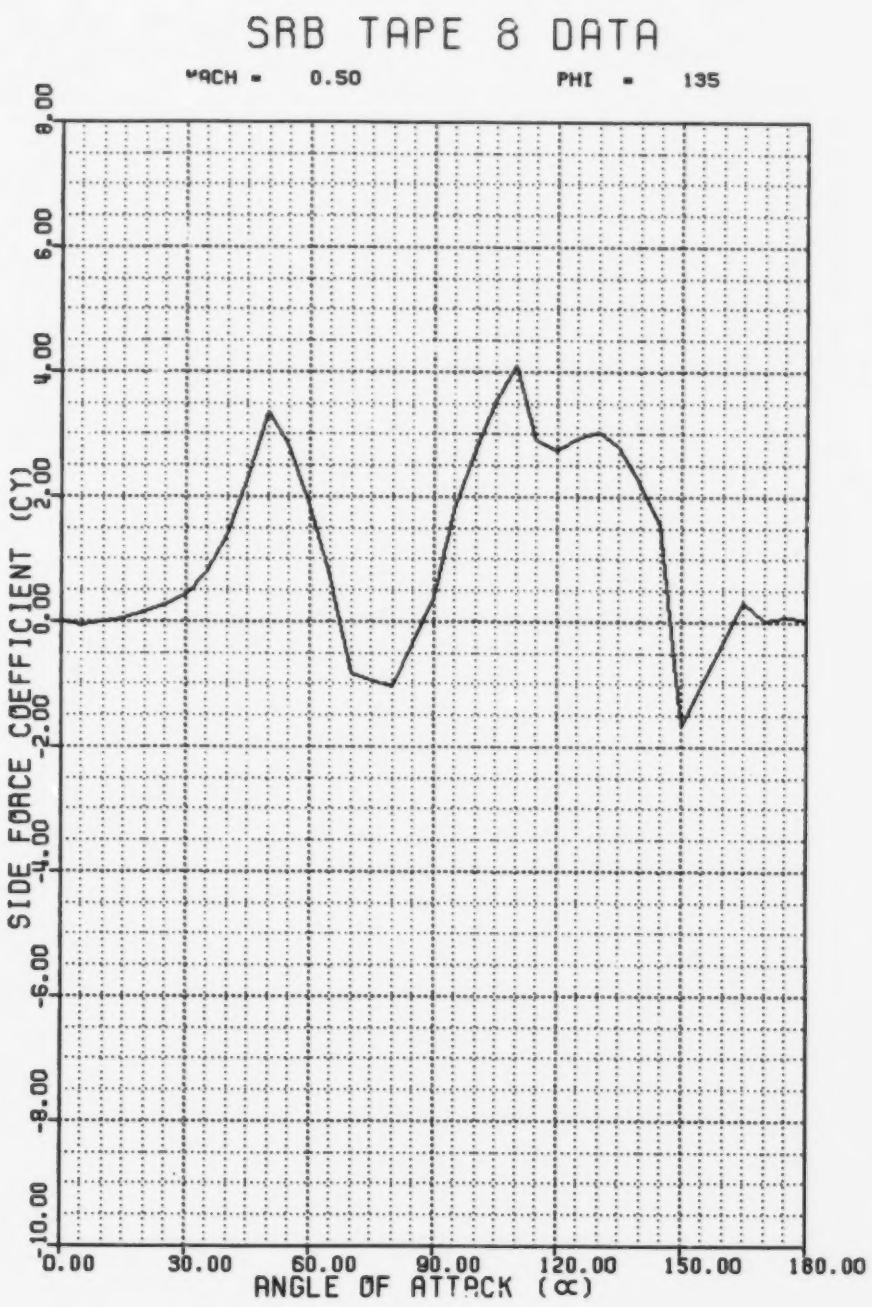
180.00
ANGLE OF ATTACK (α)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-2.00
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0.00
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120.00
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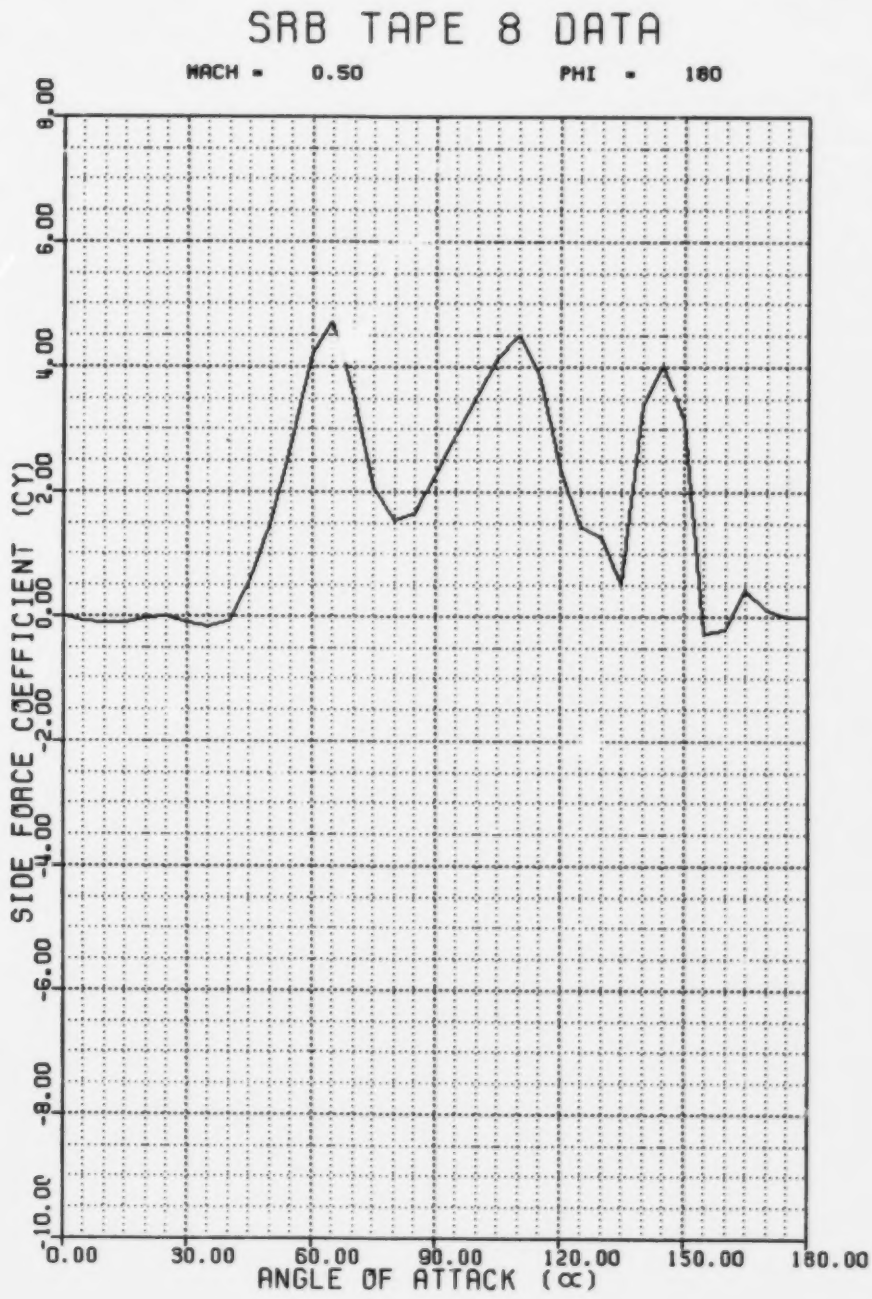
ANGLE OF ATTACK (α)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PHI = 180
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4.00
2.00
0.00
-2.00
-4.00
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60.00
90.00
120.00
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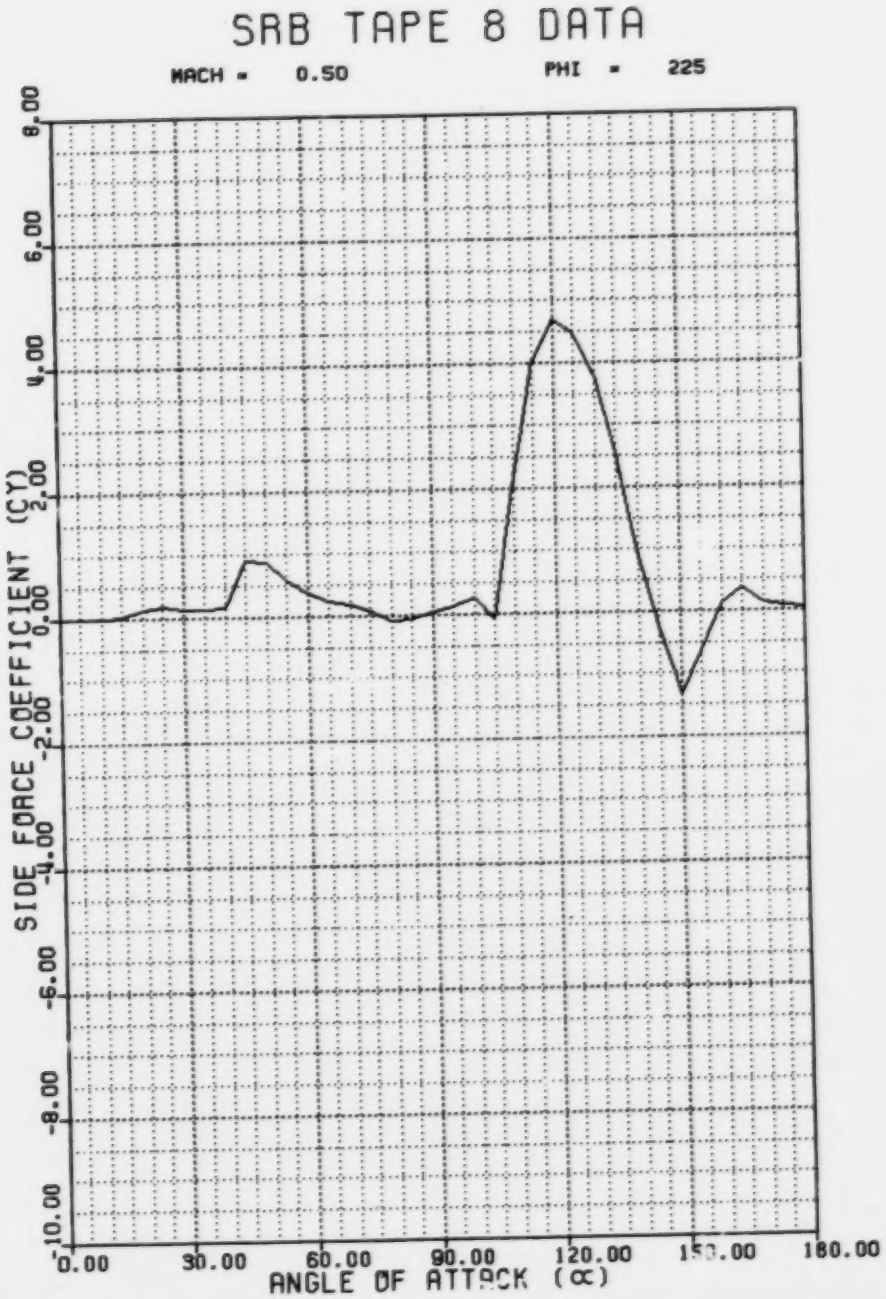
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 225
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-4.00
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0.00
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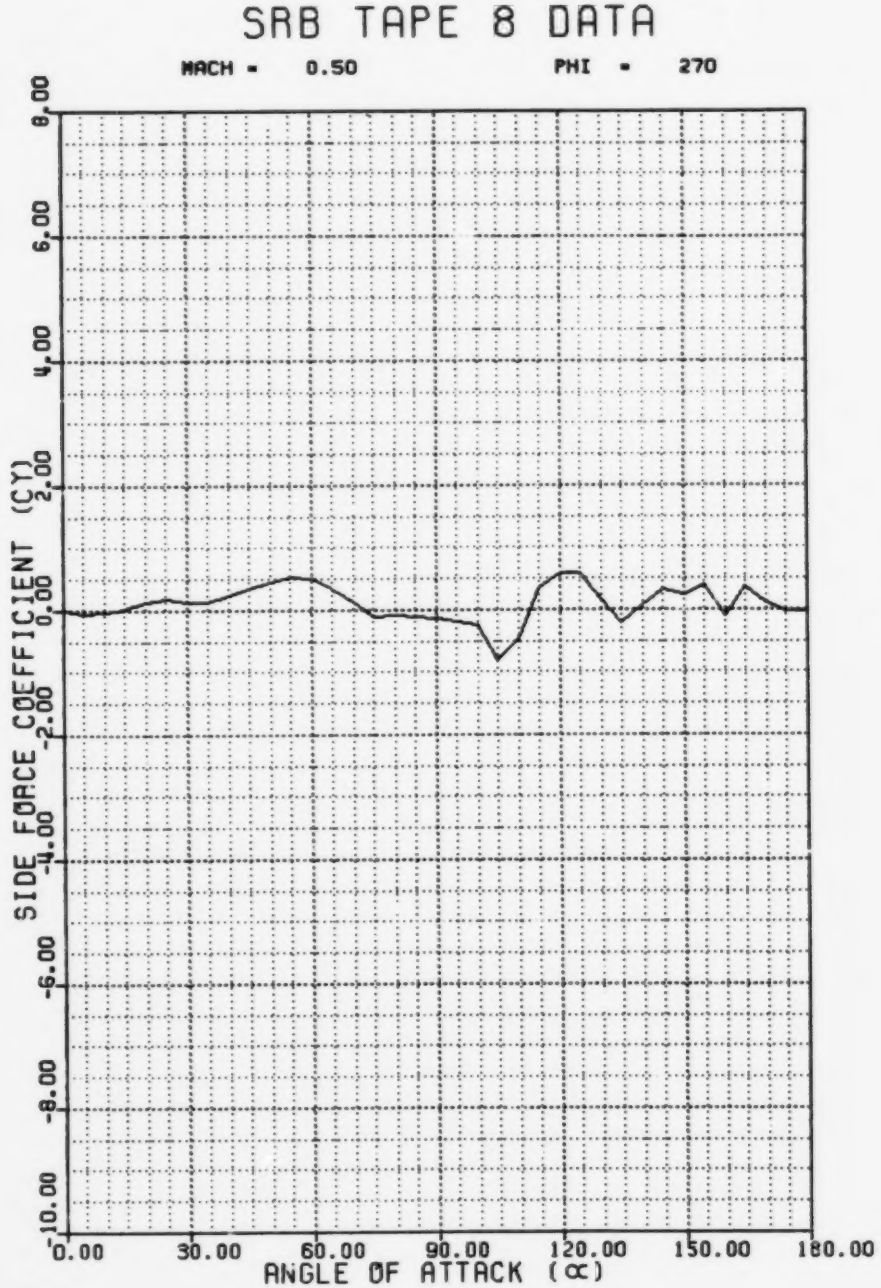
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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SIDE FORCE COEFFICIENT (CY)
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0.00
-2.00
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0.00
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60.00
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120.00
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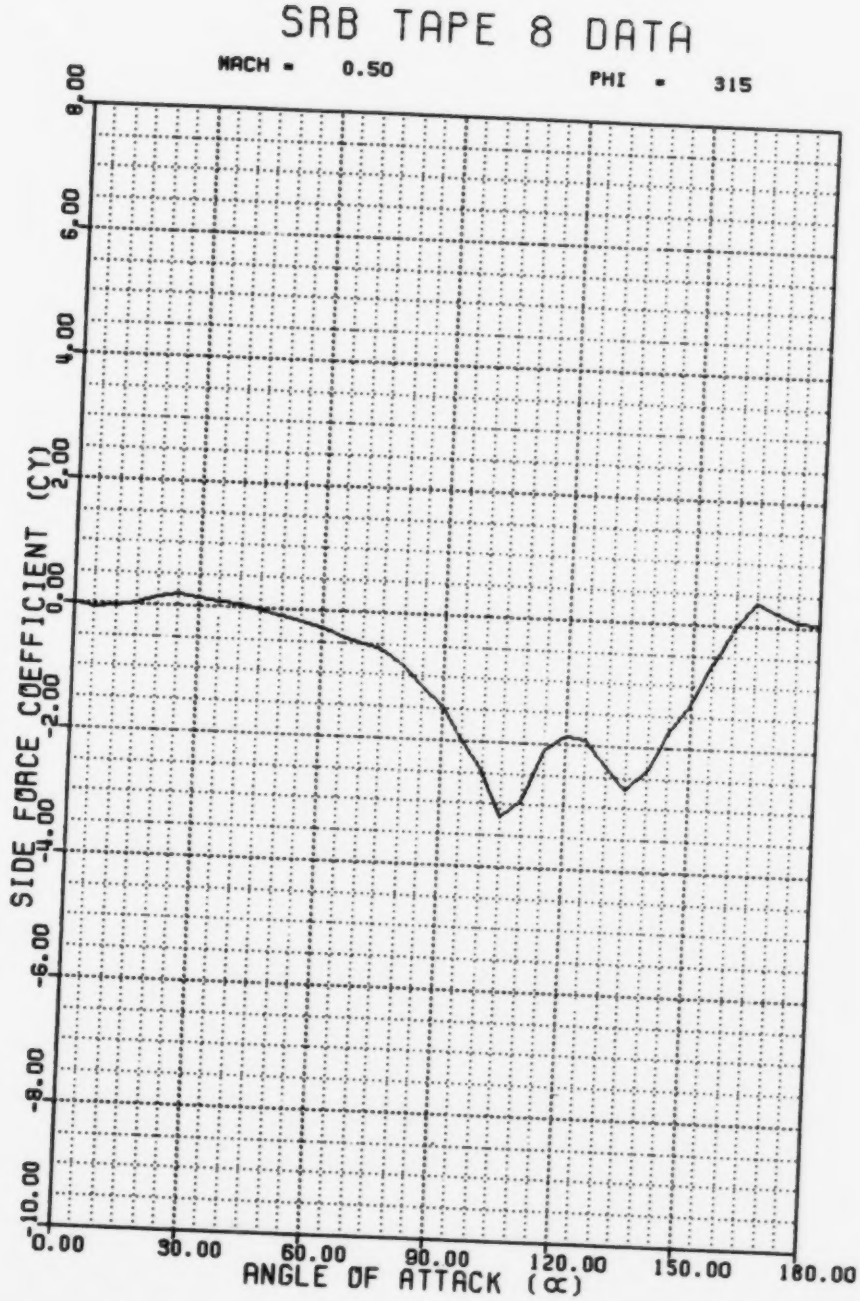
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 315
SIDE FORCE COEFFICIENT (CY)
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0.00
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0.00
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60.00
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120.00
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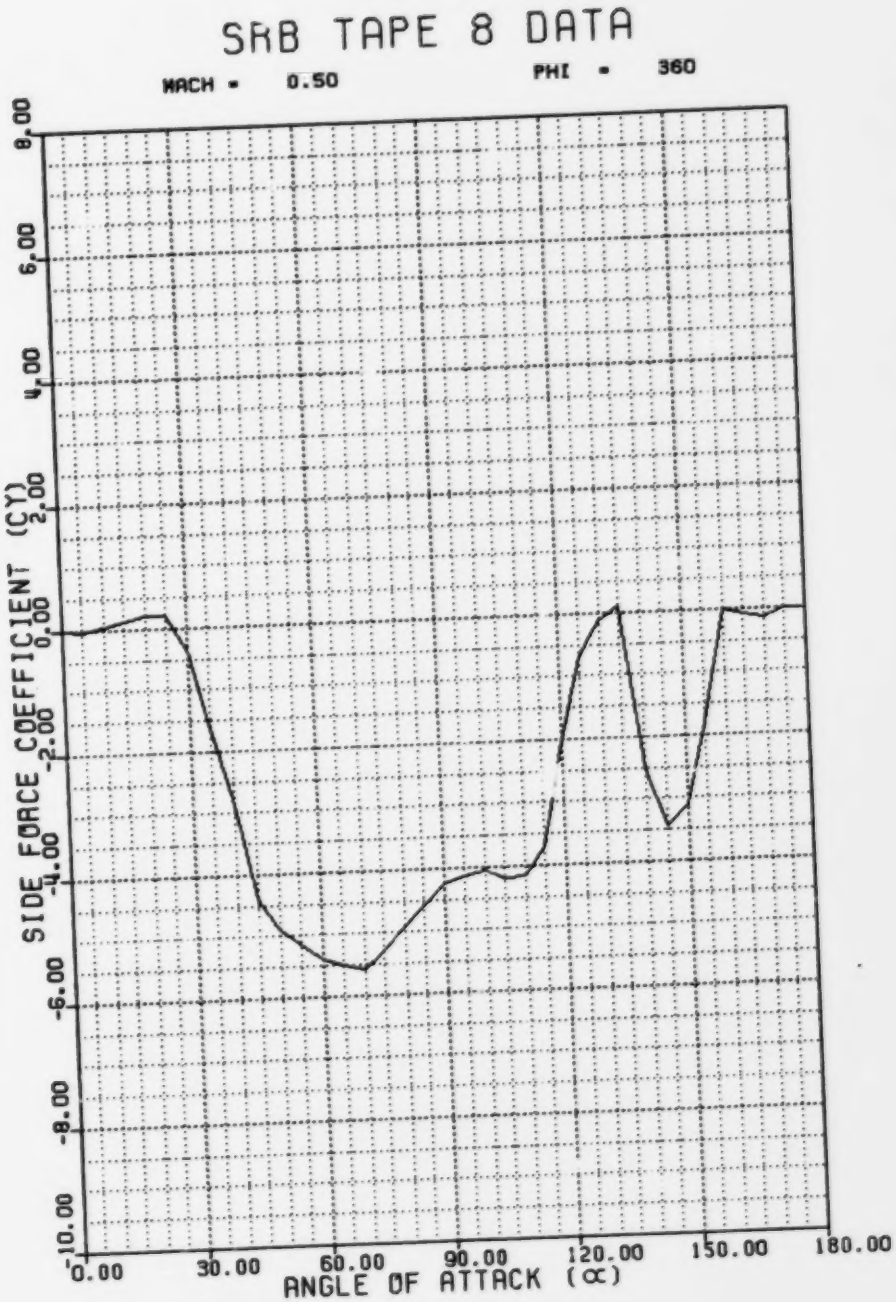
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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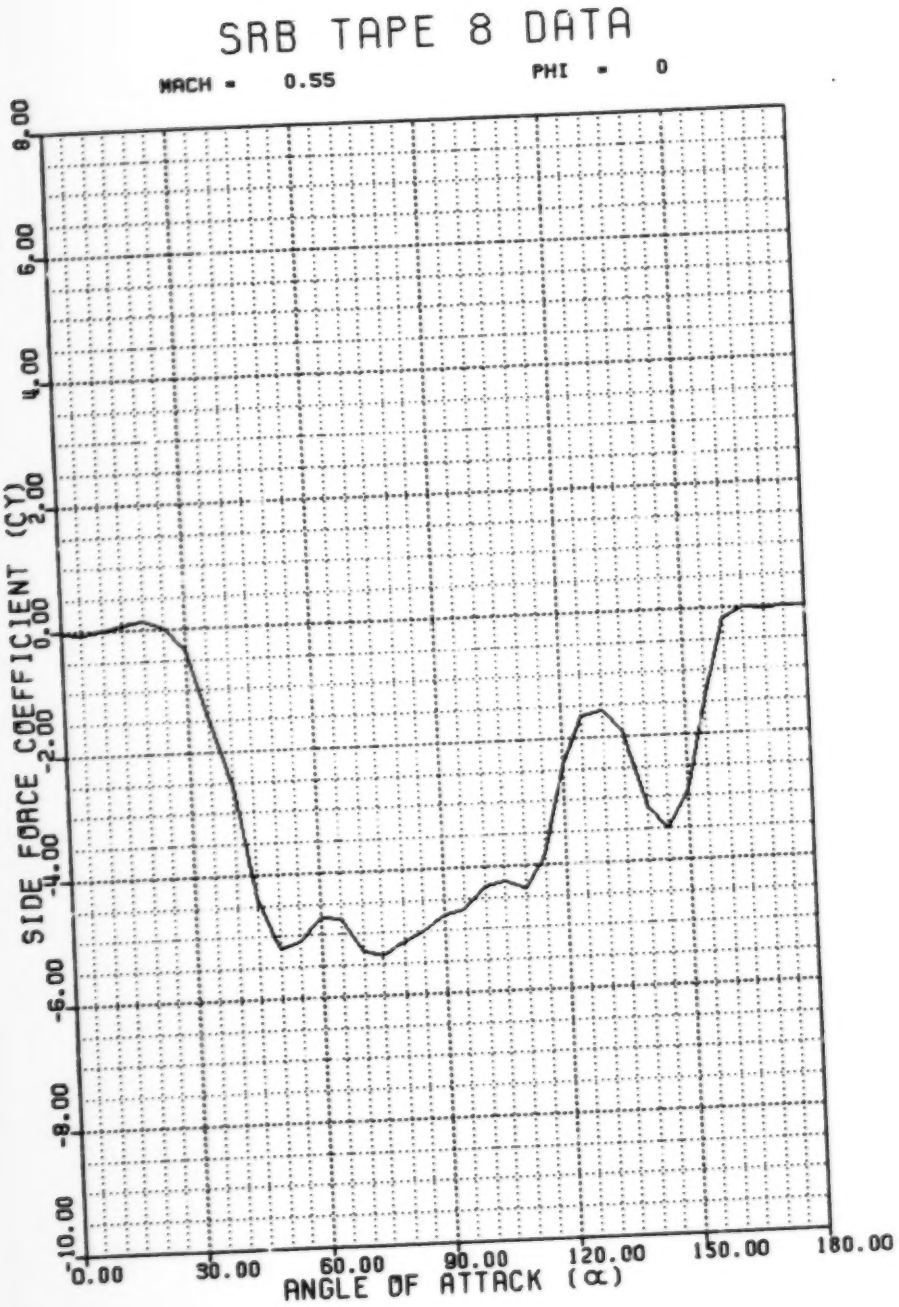
ANGLE OF ATTACK (α)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-2.00
-4.00
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0.00
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120.00
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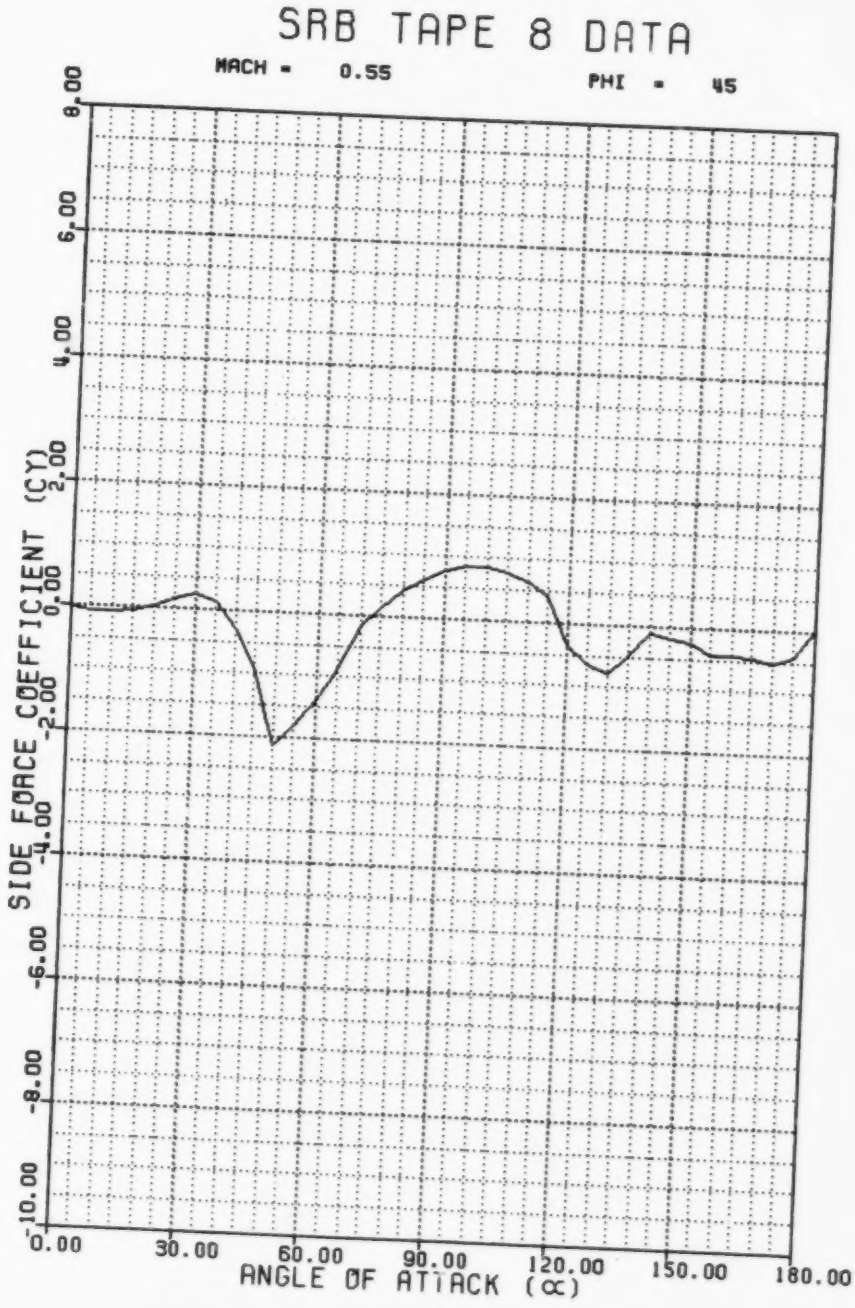
180.00
ANGLE OF ATTACK (α)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2.00
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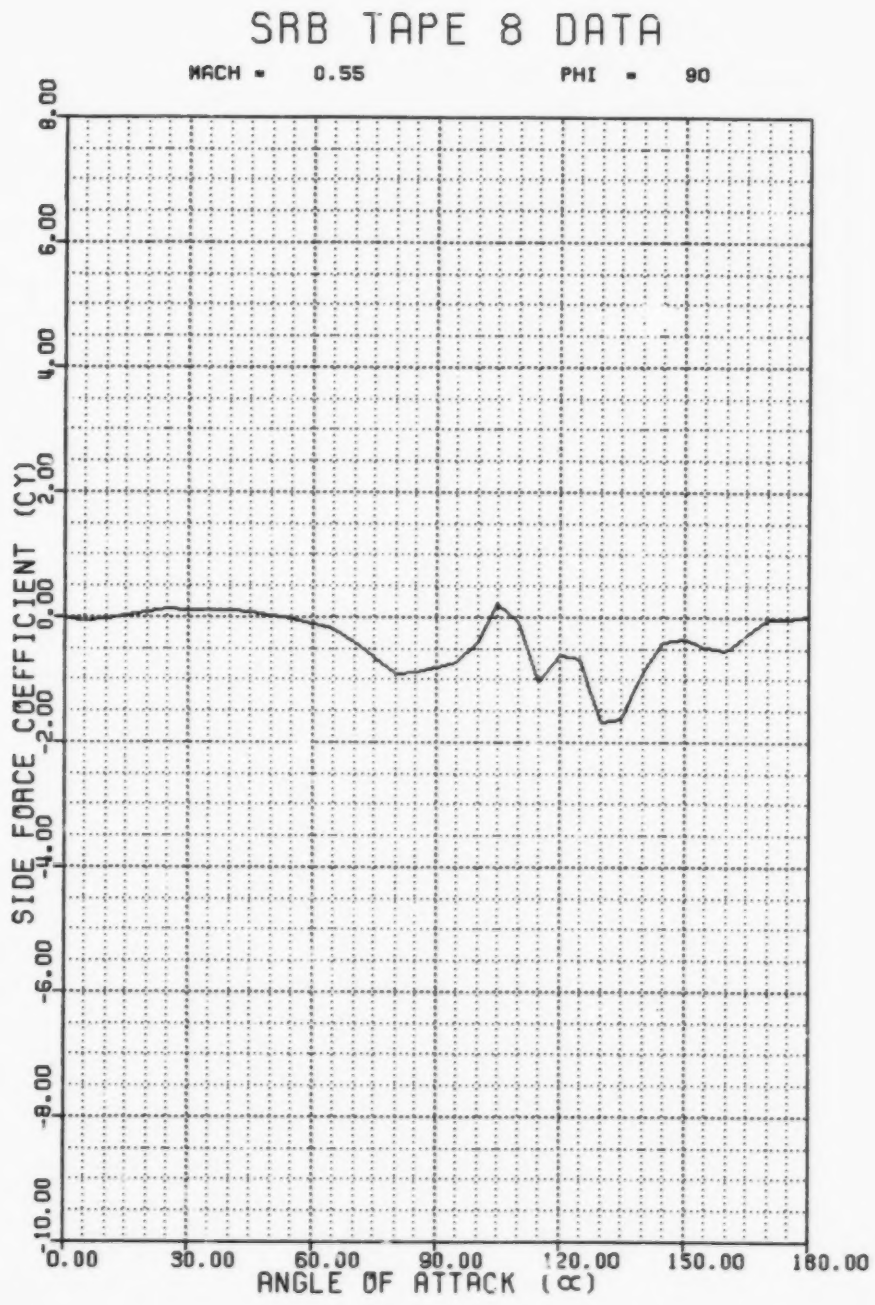
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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0.00
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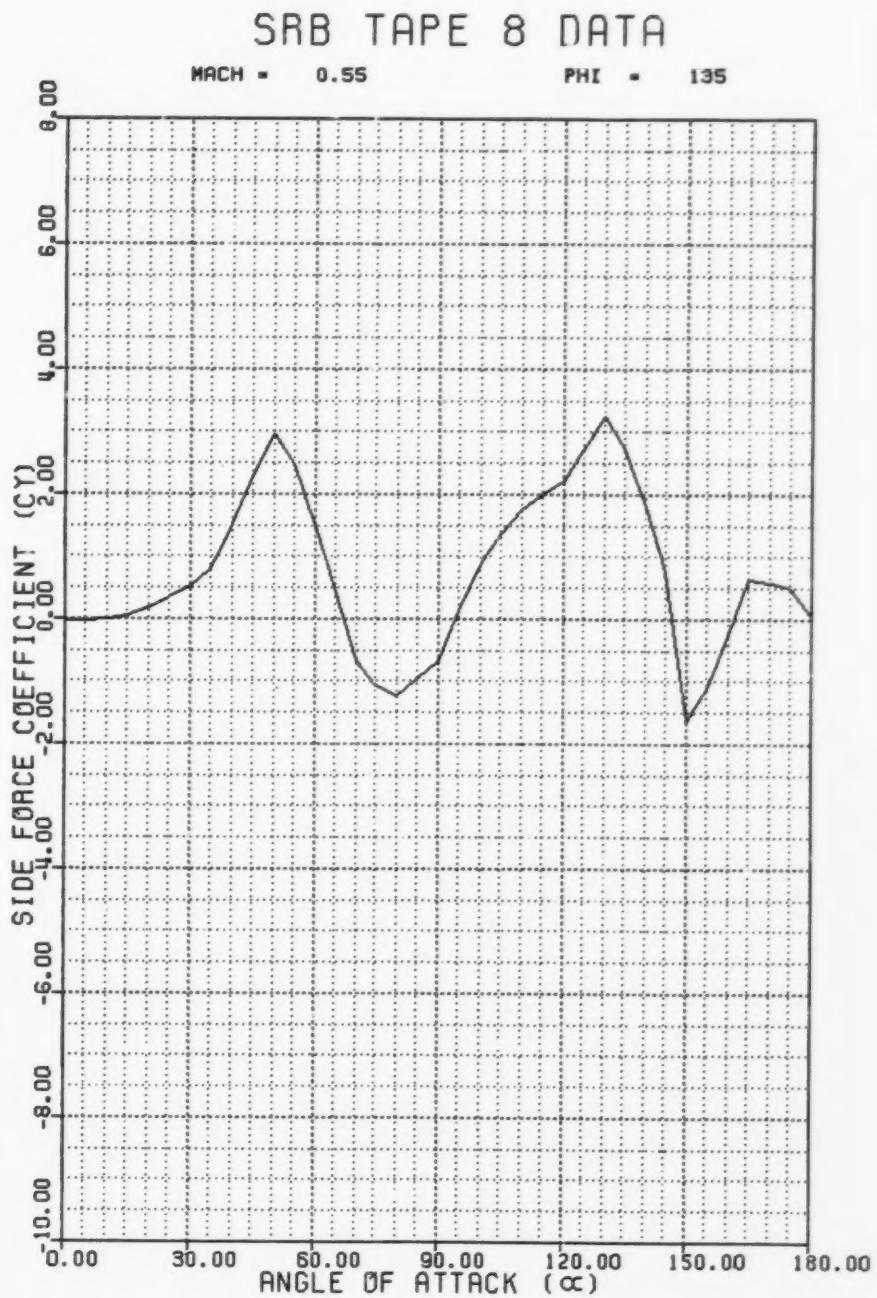
ANGLE OF ATTACK (α)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0.00
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-4.00
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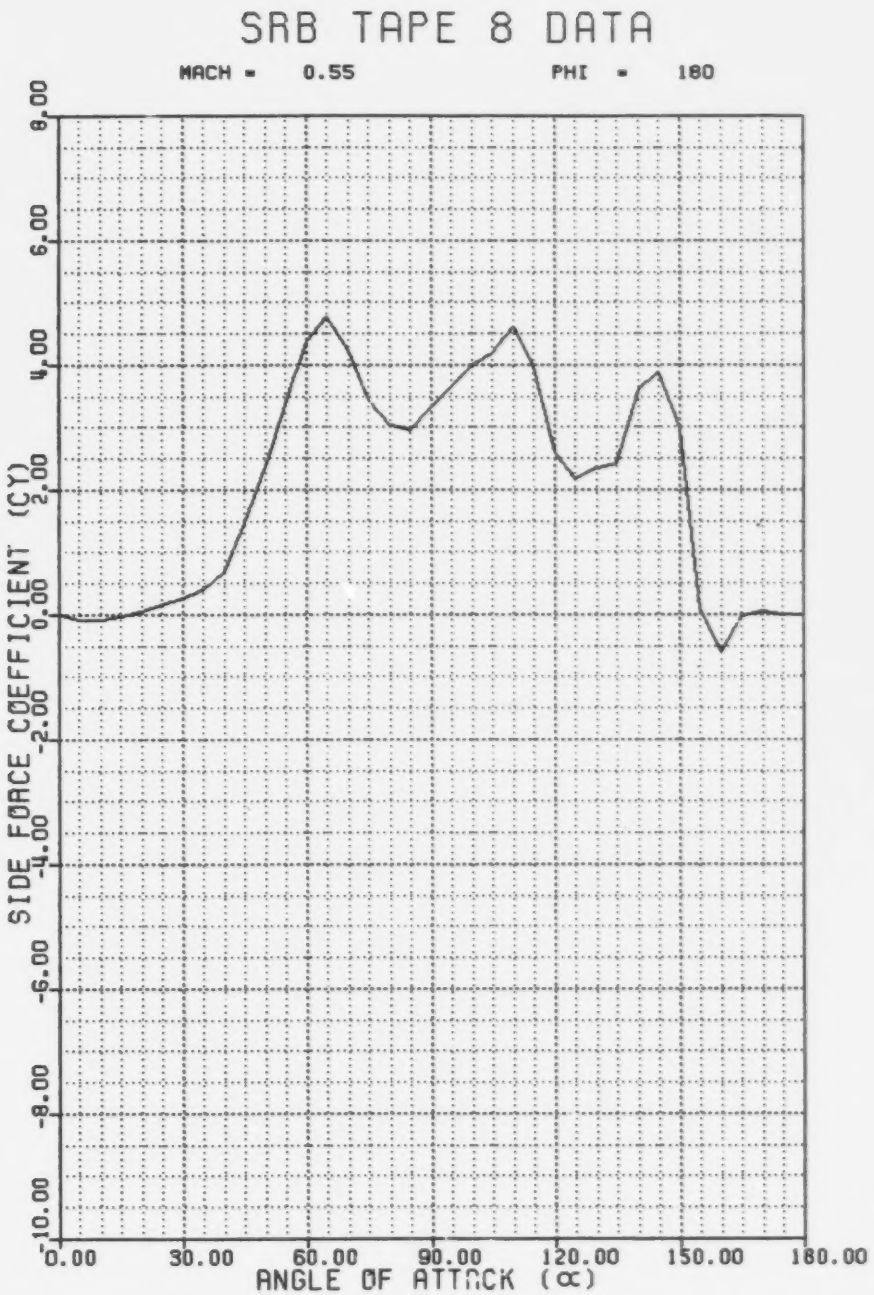
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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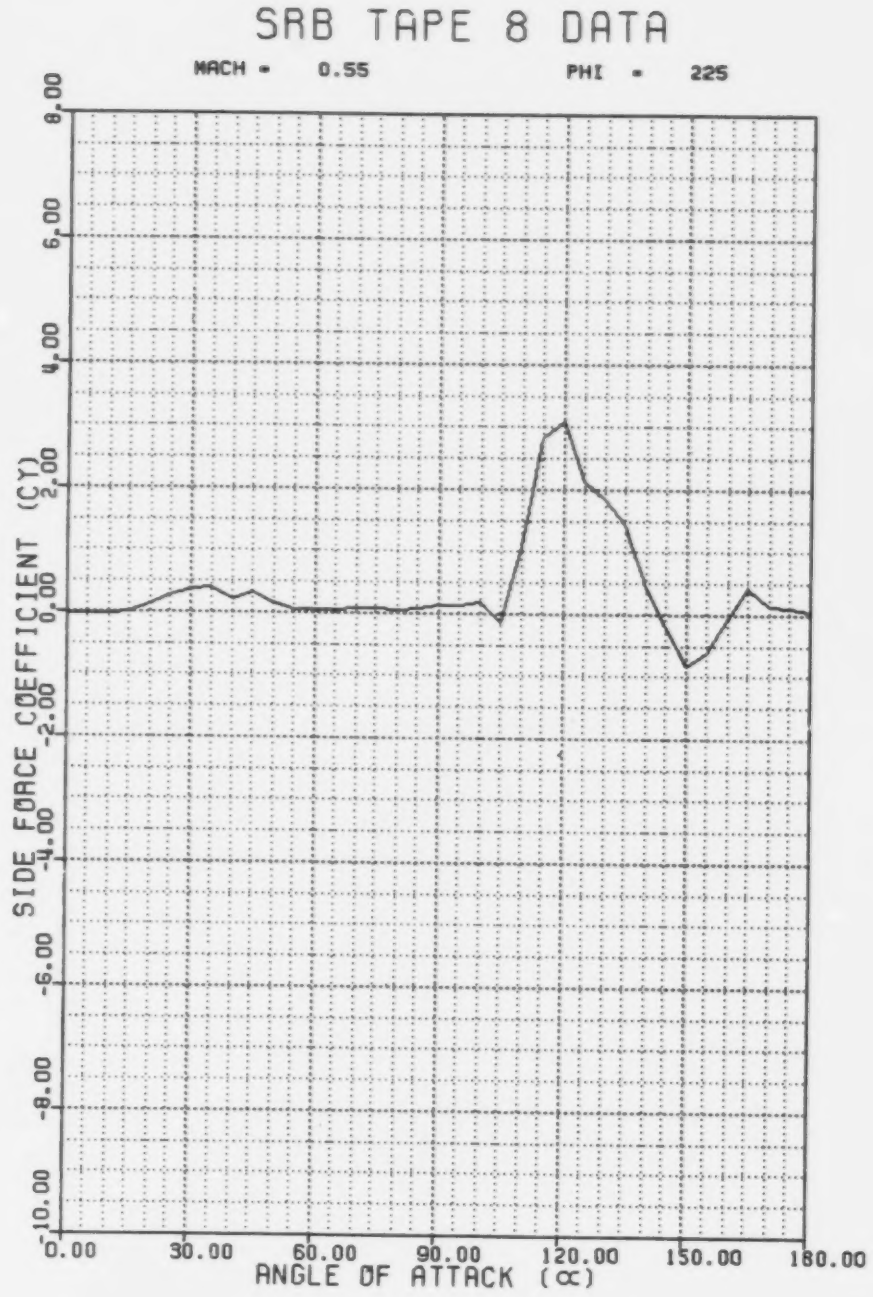
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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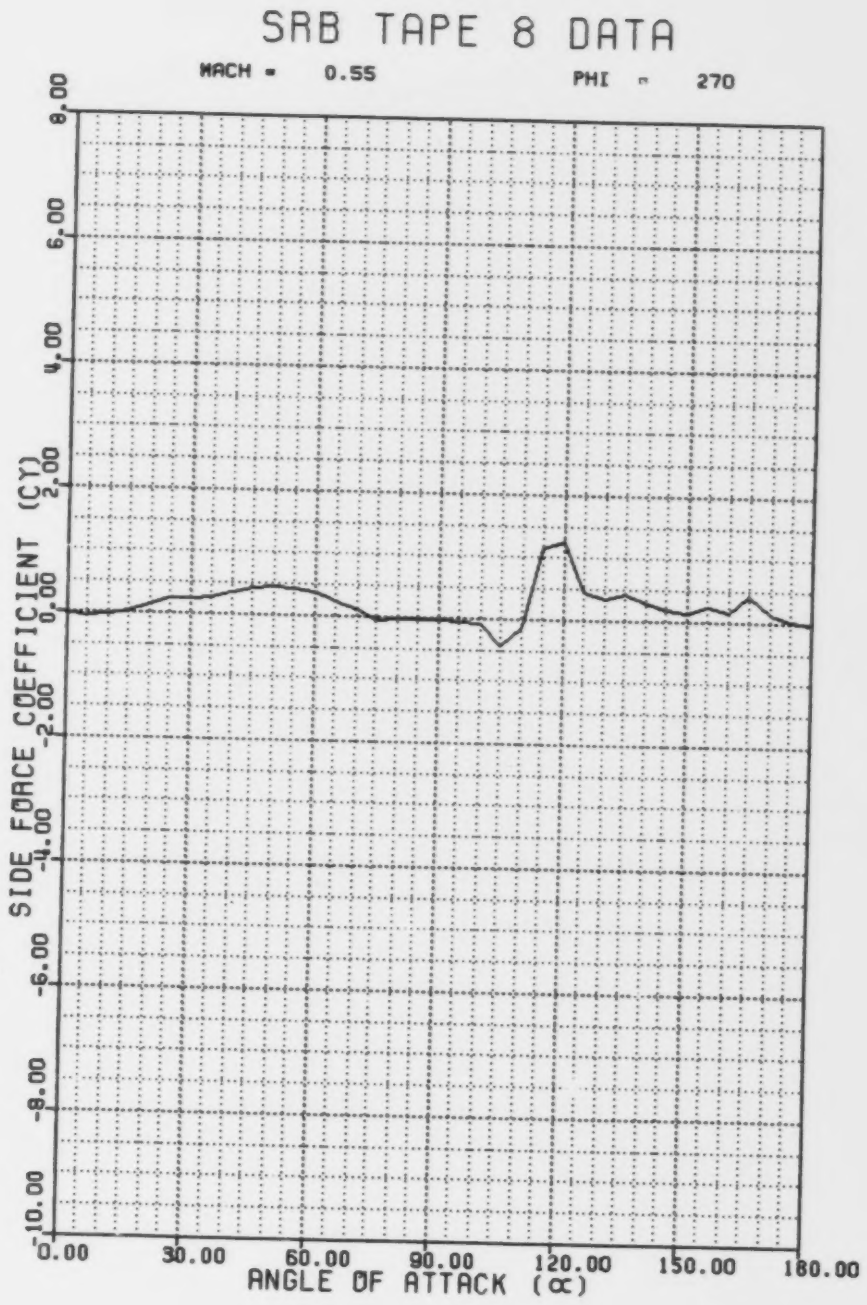
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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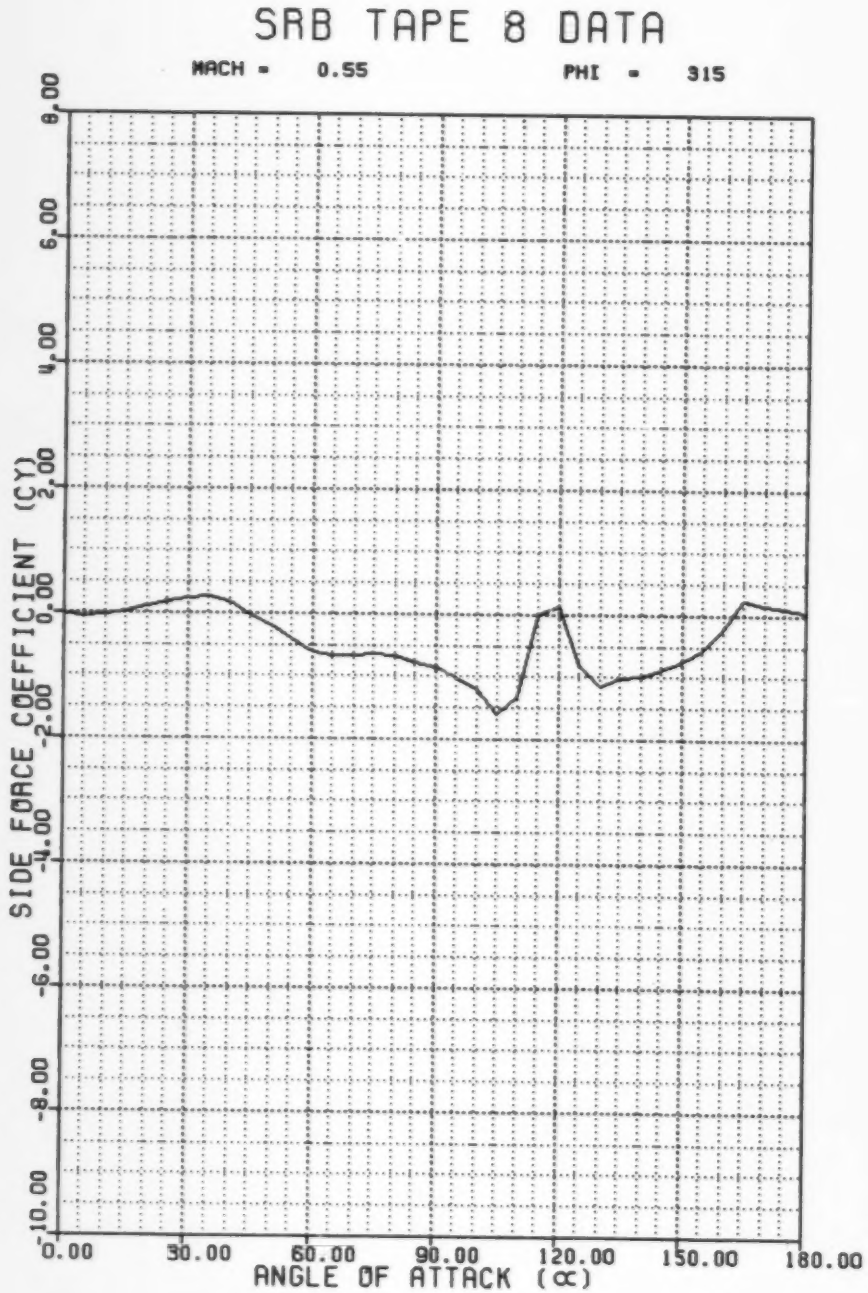
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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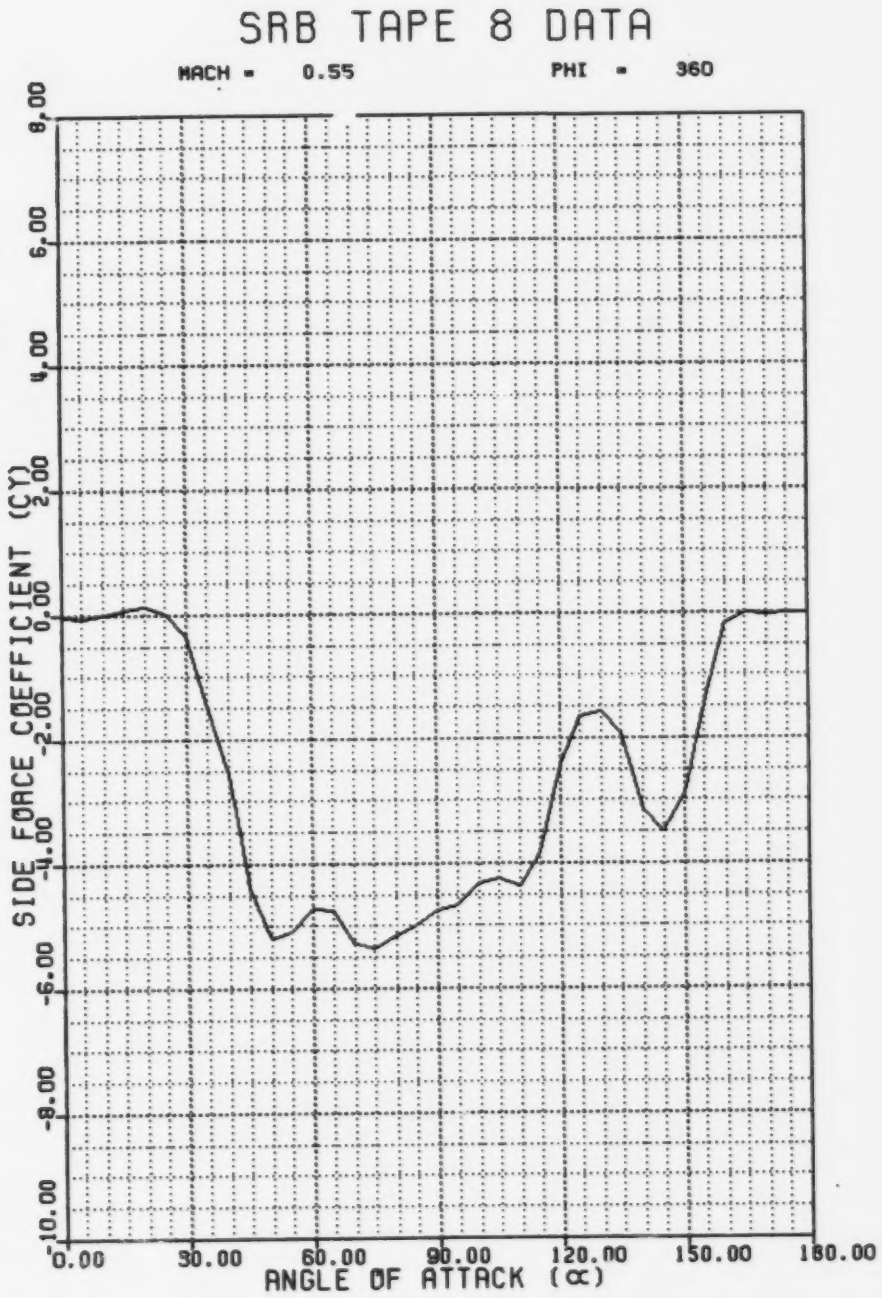
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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2.00
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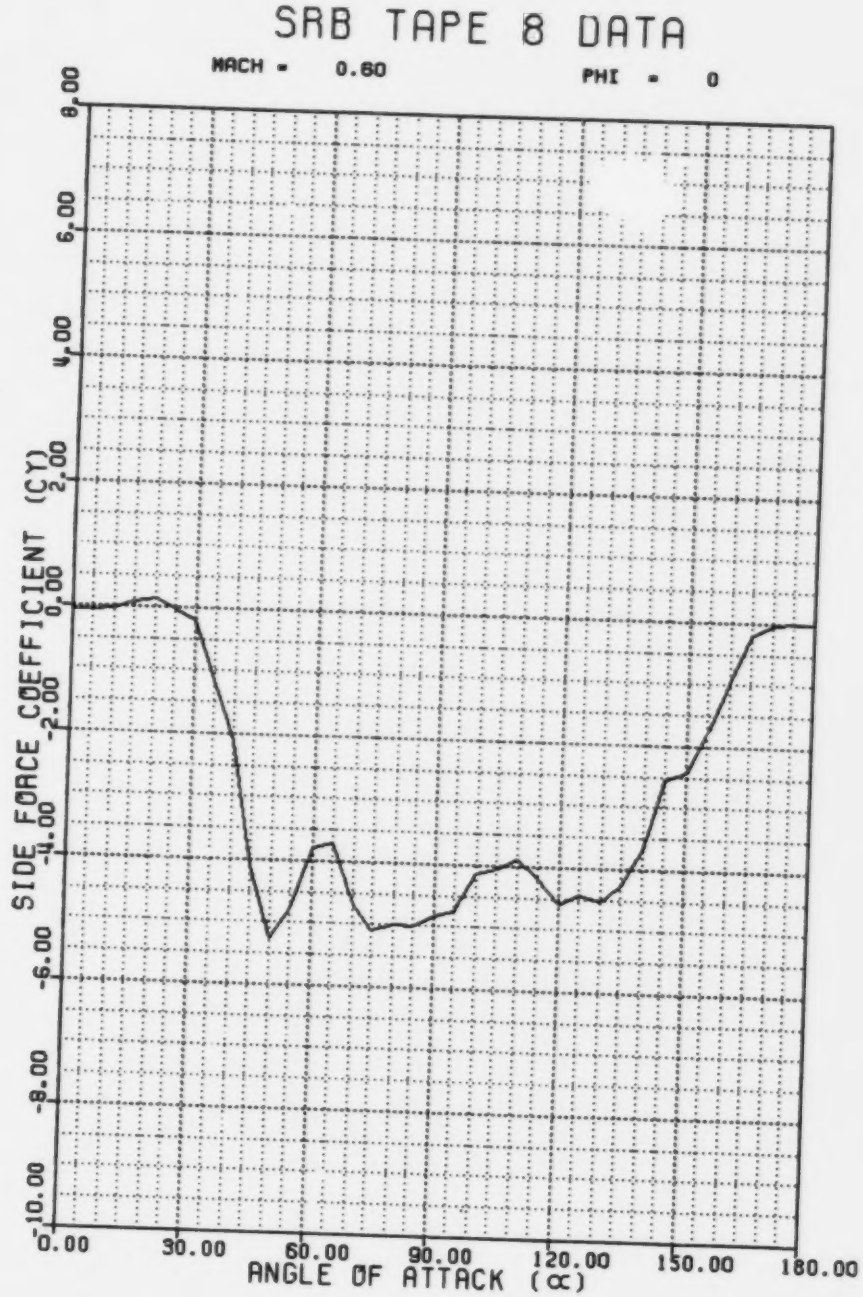
ANGLE OF ATTACK (α)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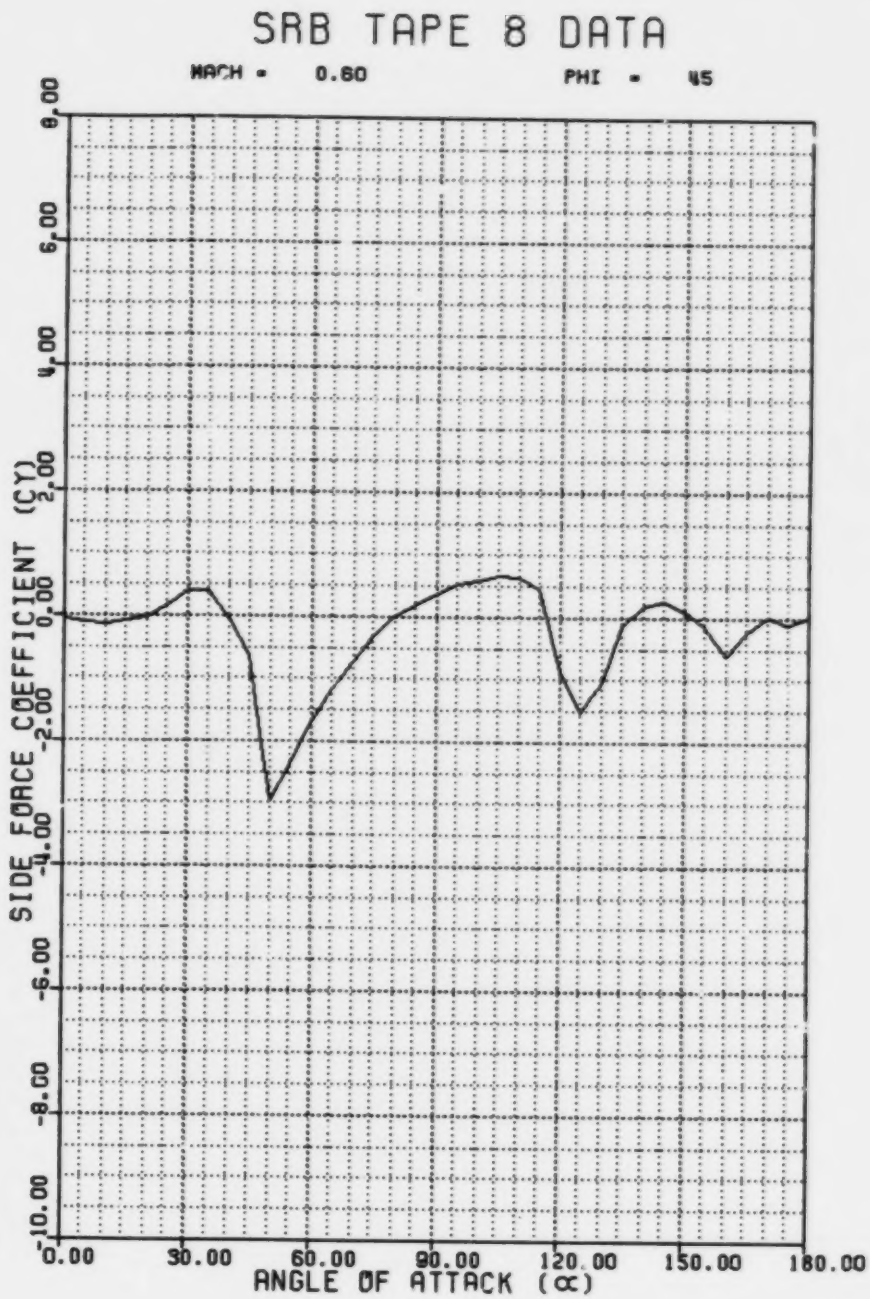
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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0.00
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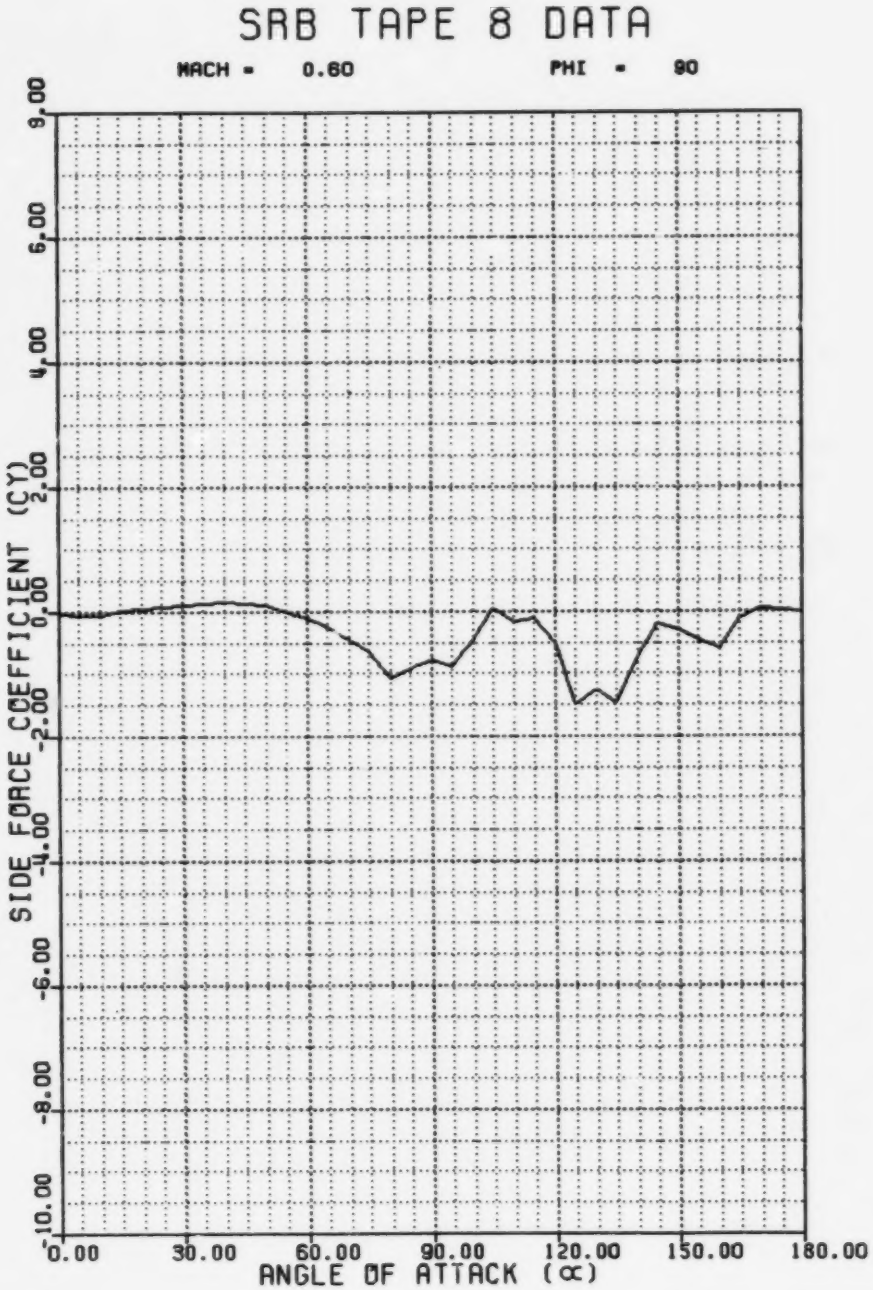
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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0.00
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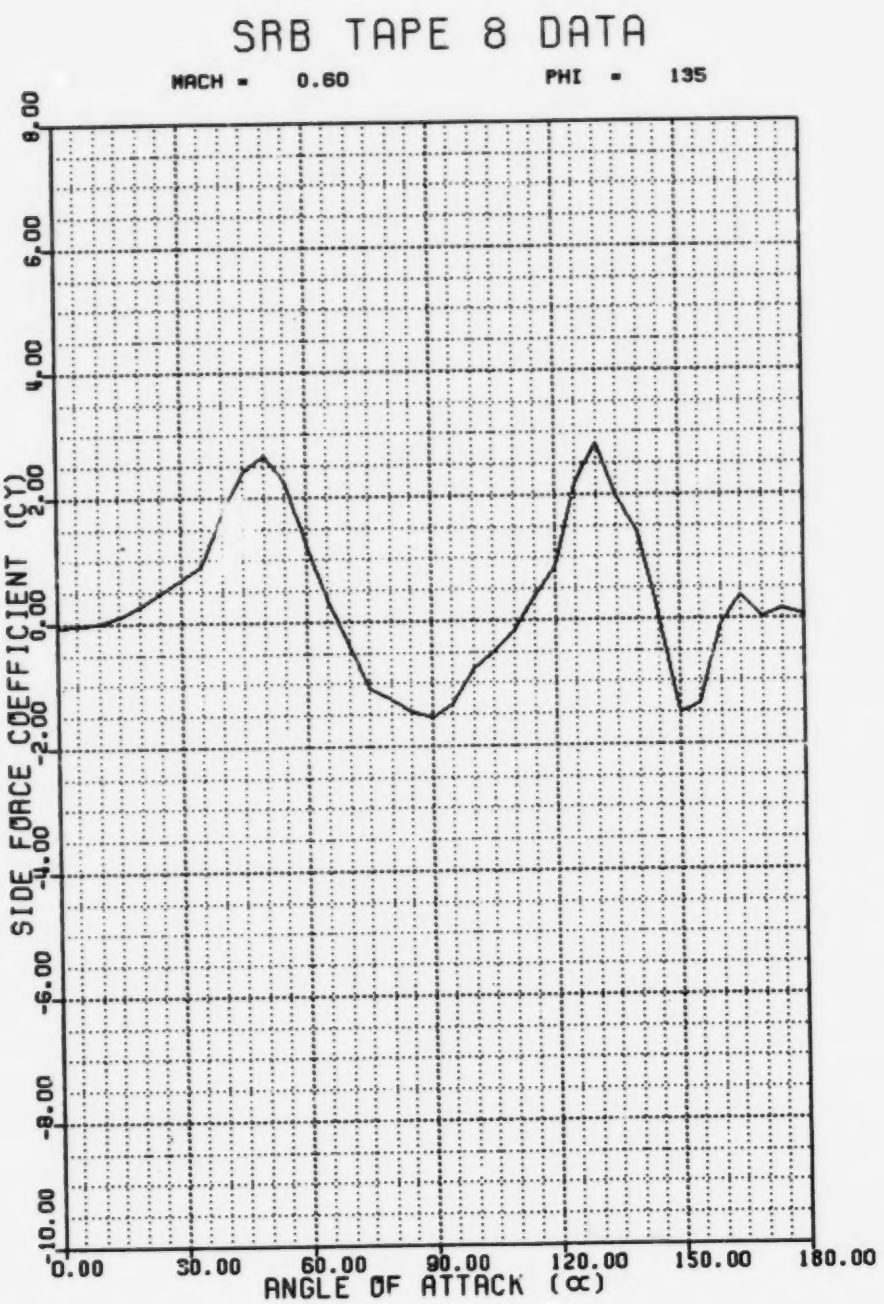
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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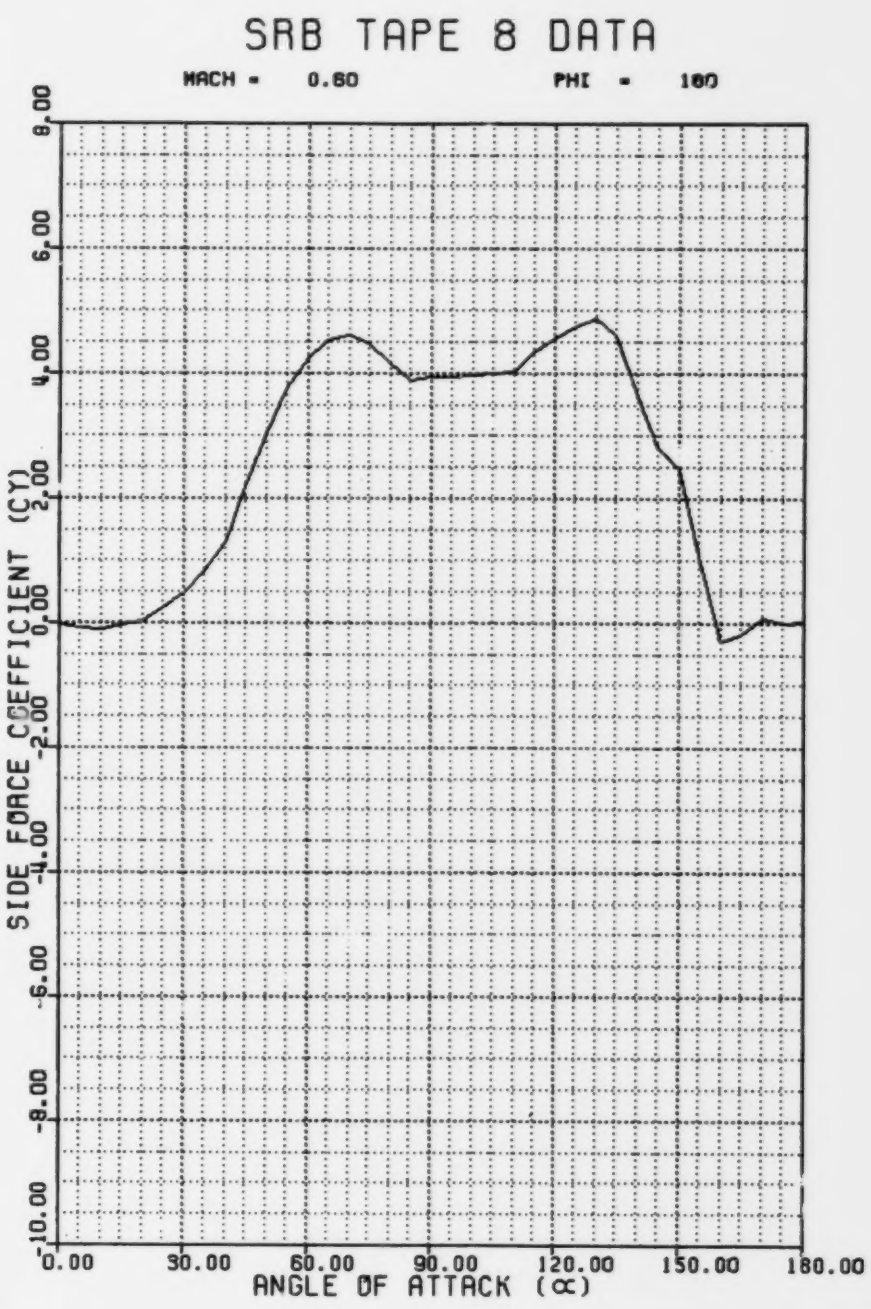
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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30.00
60.00
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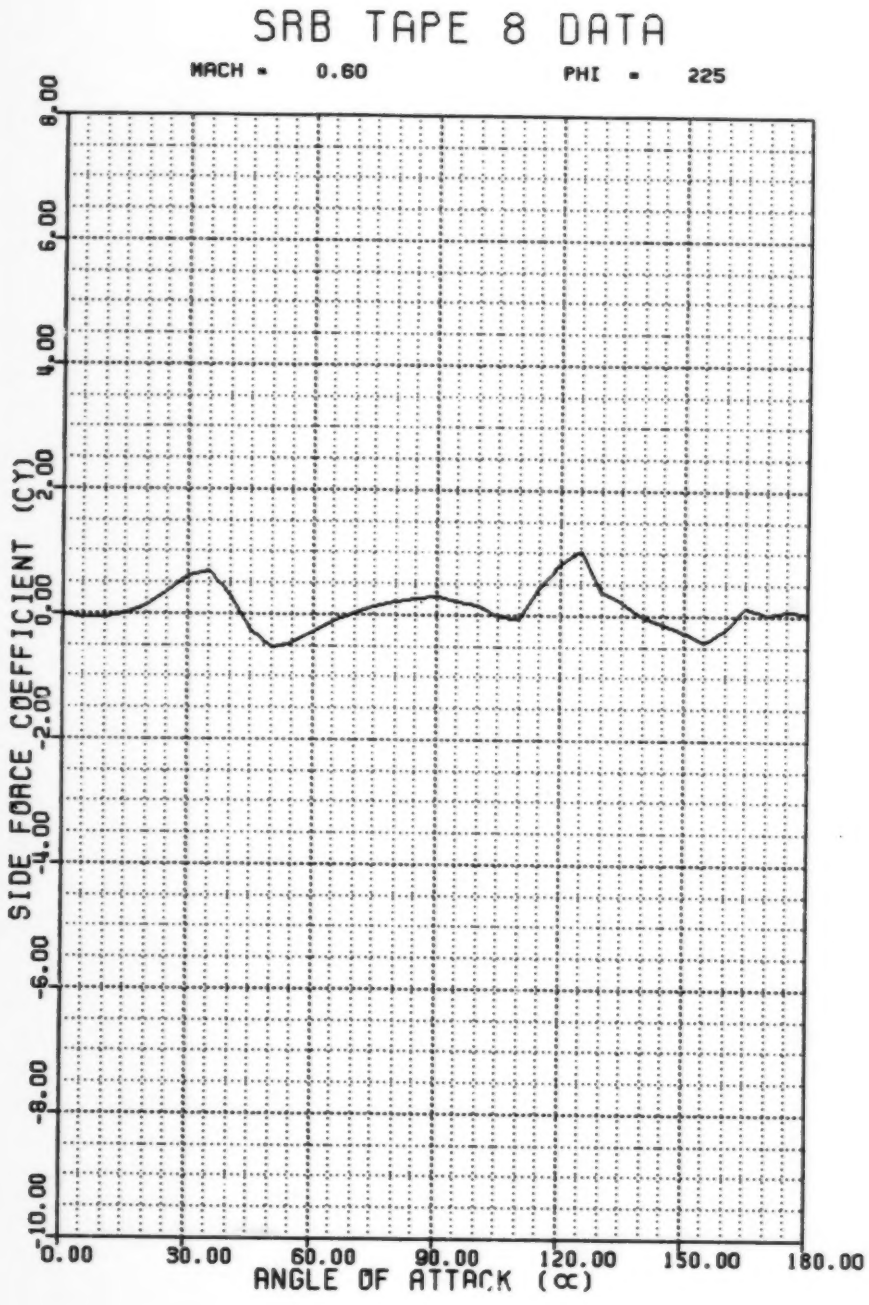
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.60
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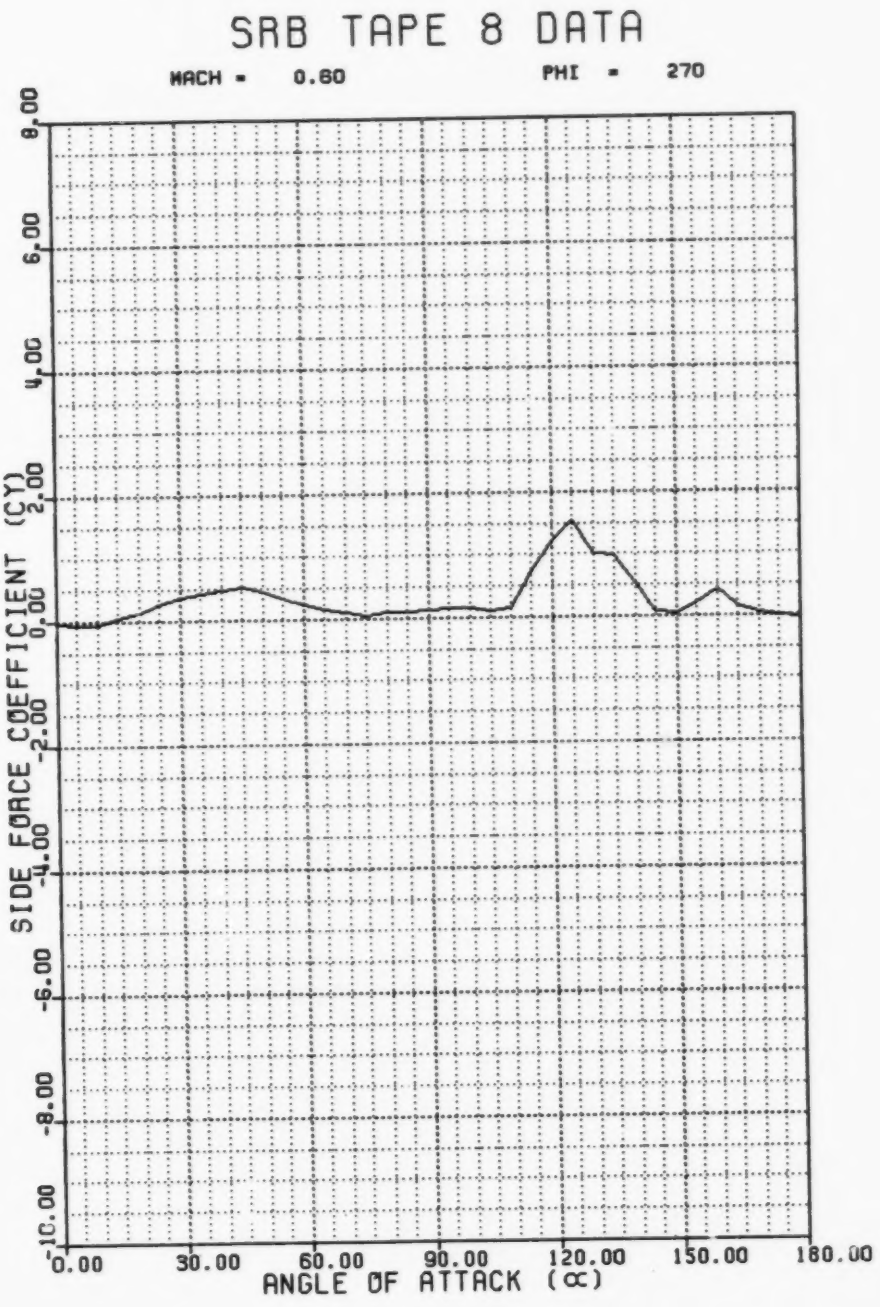
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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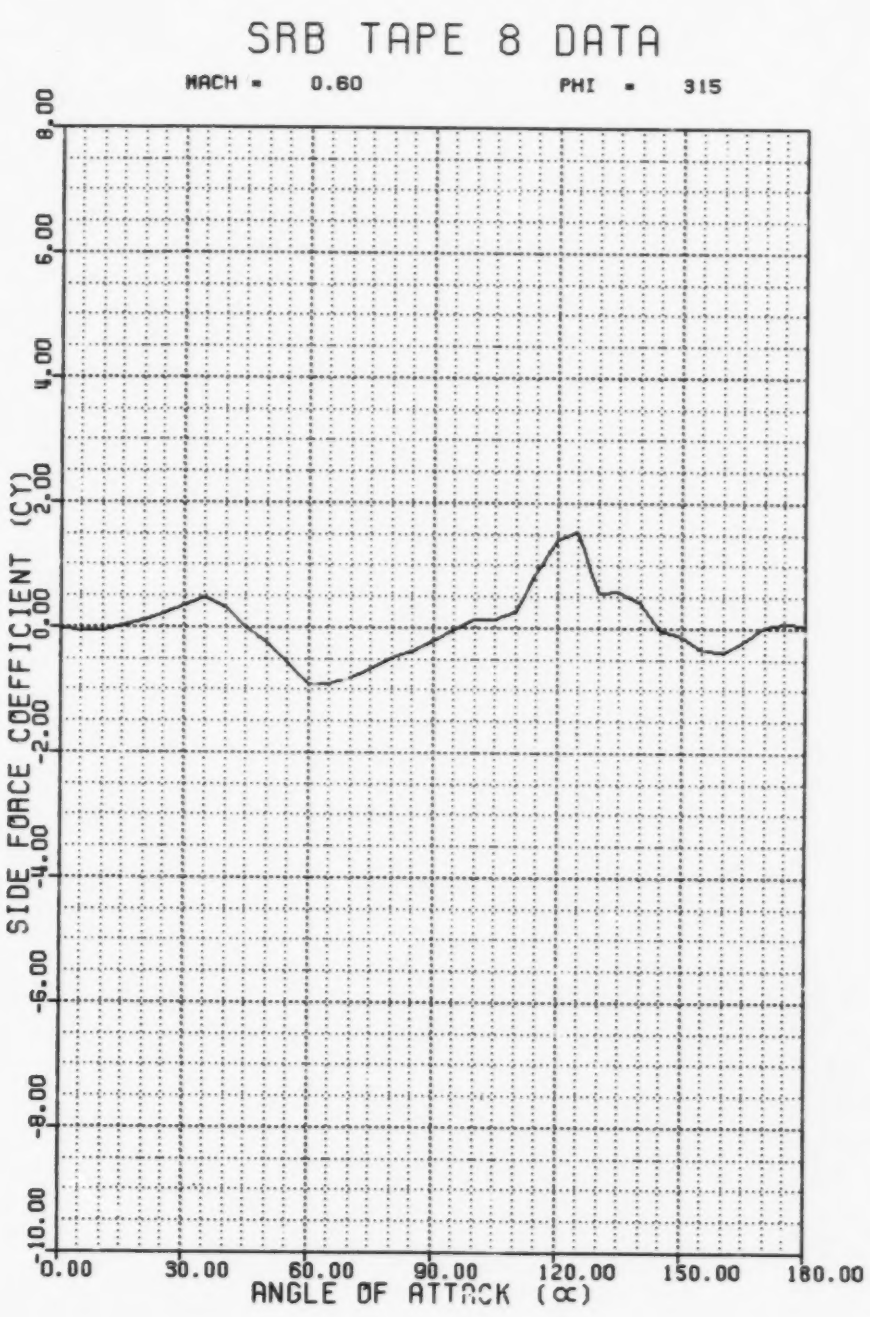
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
PHI = 315
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0.00
-2.00
-4.00
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0.00
30.00
60.00
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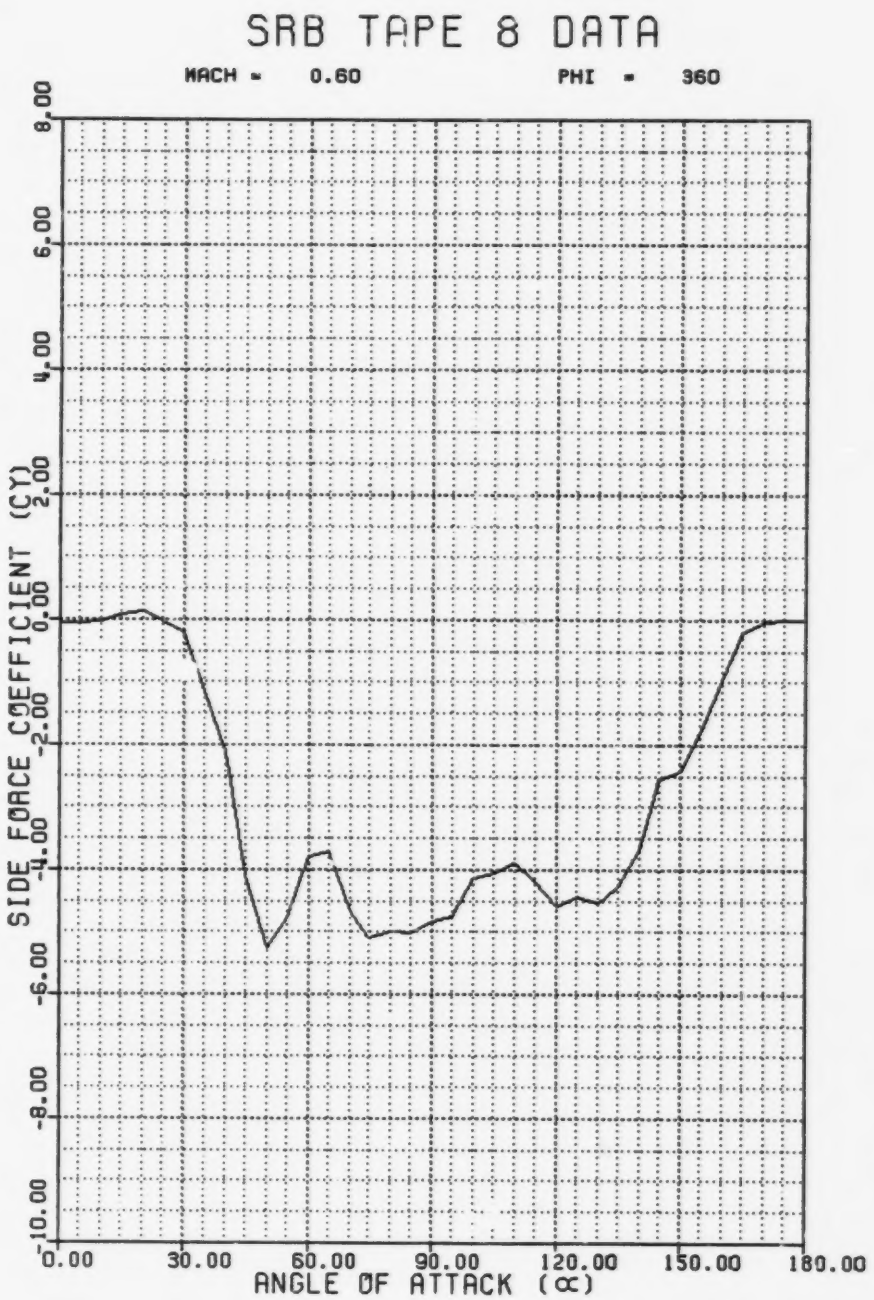
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
PHI = 360
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4.00
2.00
0.00
-2.00
-4.00
-6.00
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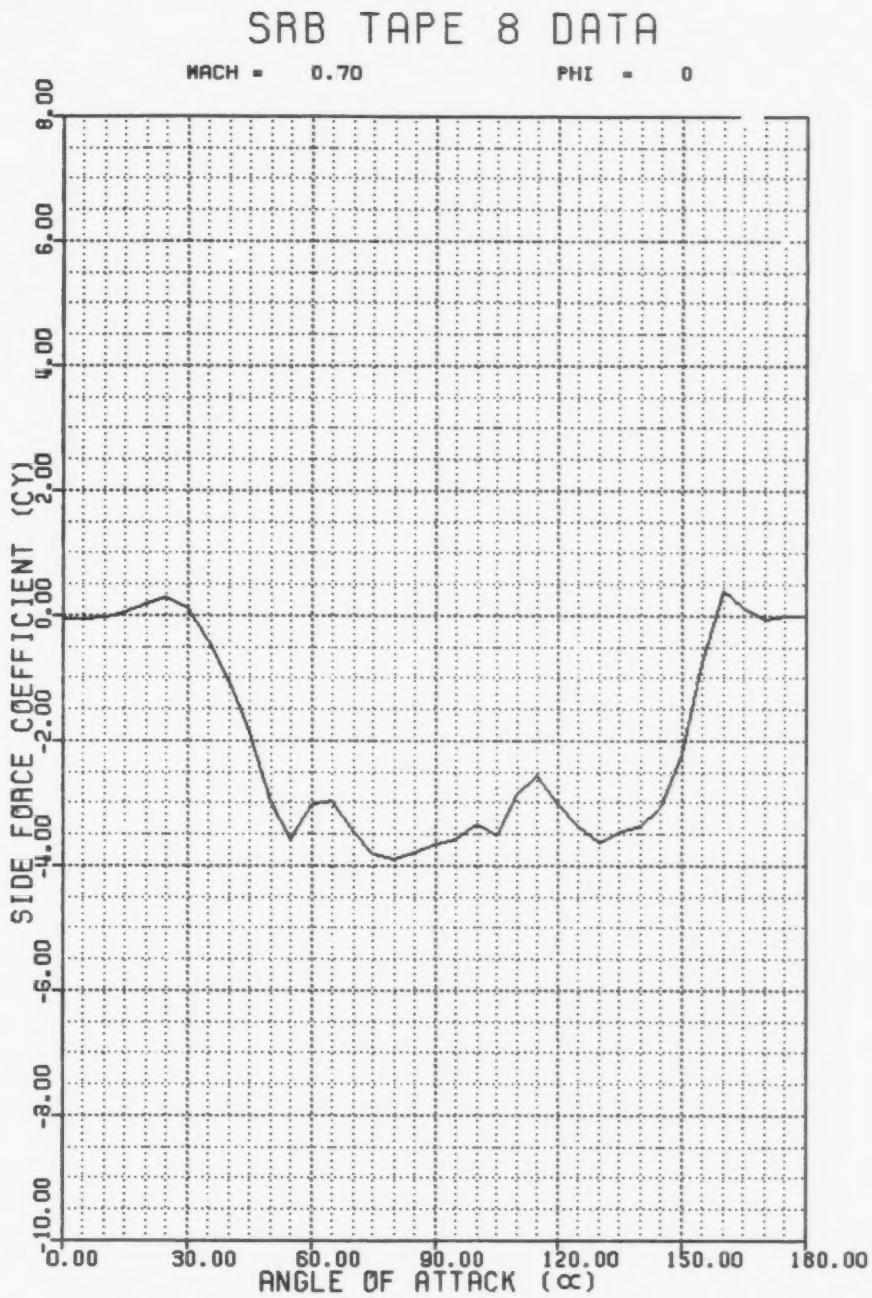
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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2.00
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-2.00
-4.00
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0.00
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60.00
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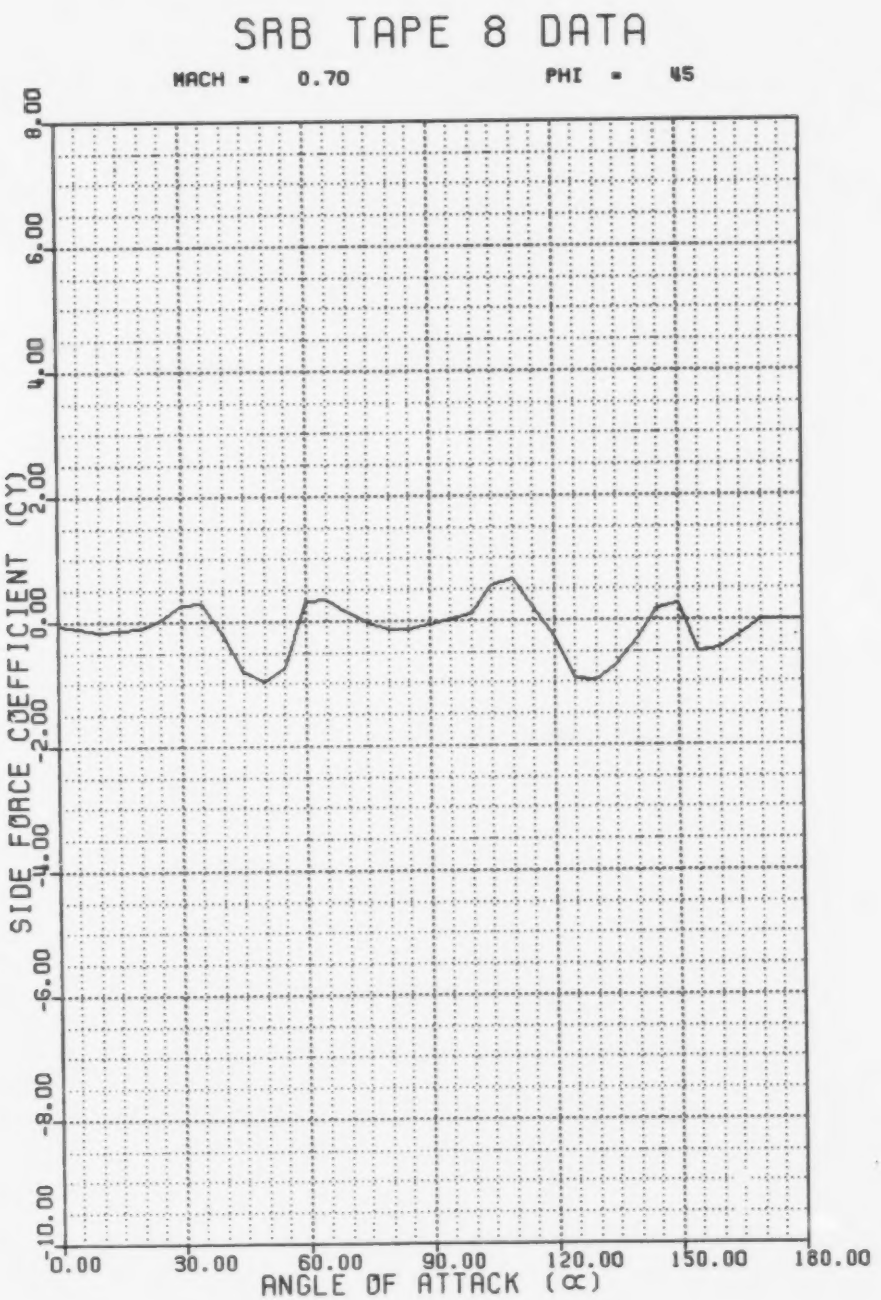
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
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-2.00
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60.00
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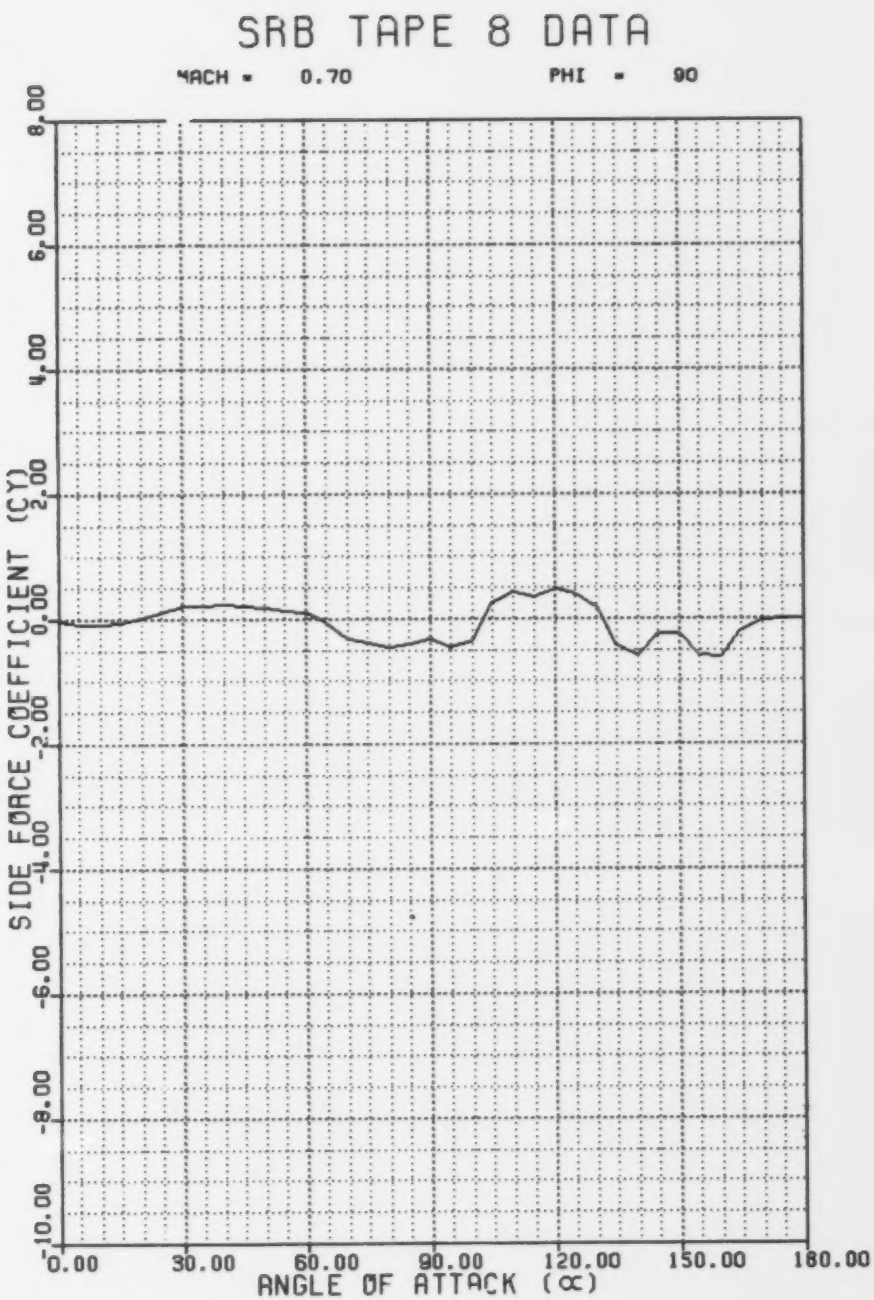
ANGLE OF ATTACK (α)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MACH = 0.70
PHI = 90
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0.00
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60.00
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120.00
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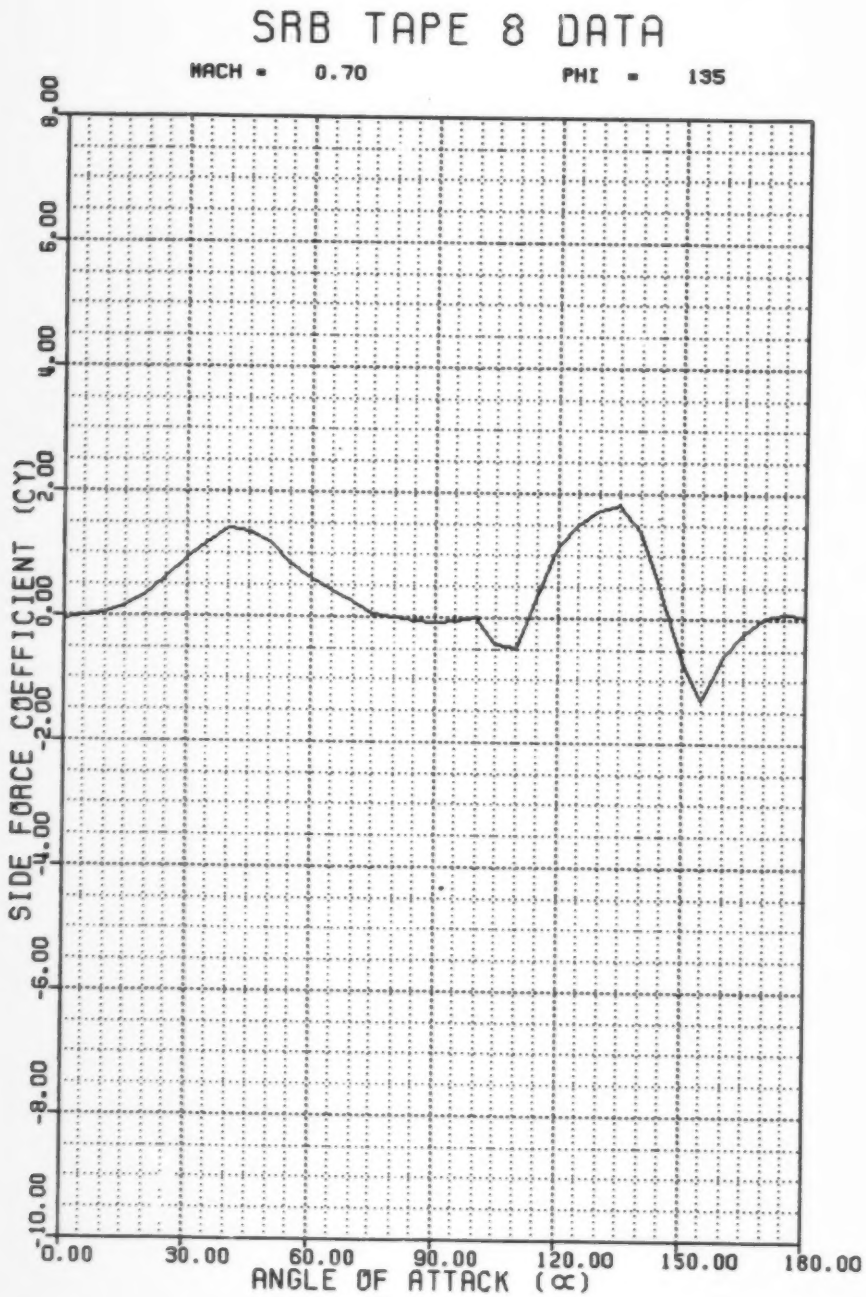
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 135
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0.00
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60.00
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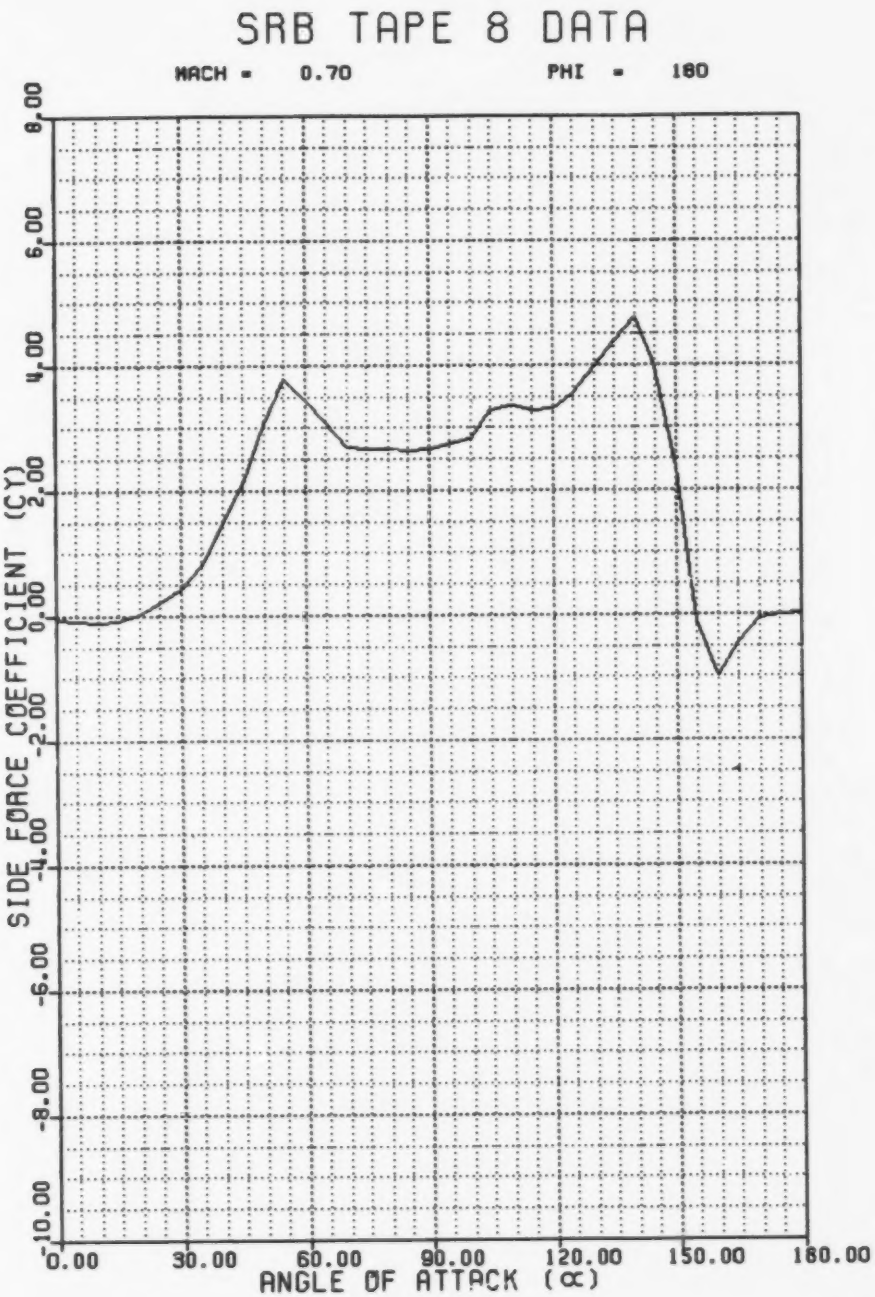
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 180
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4.00
2.00
0.00
-2.00
-4.00
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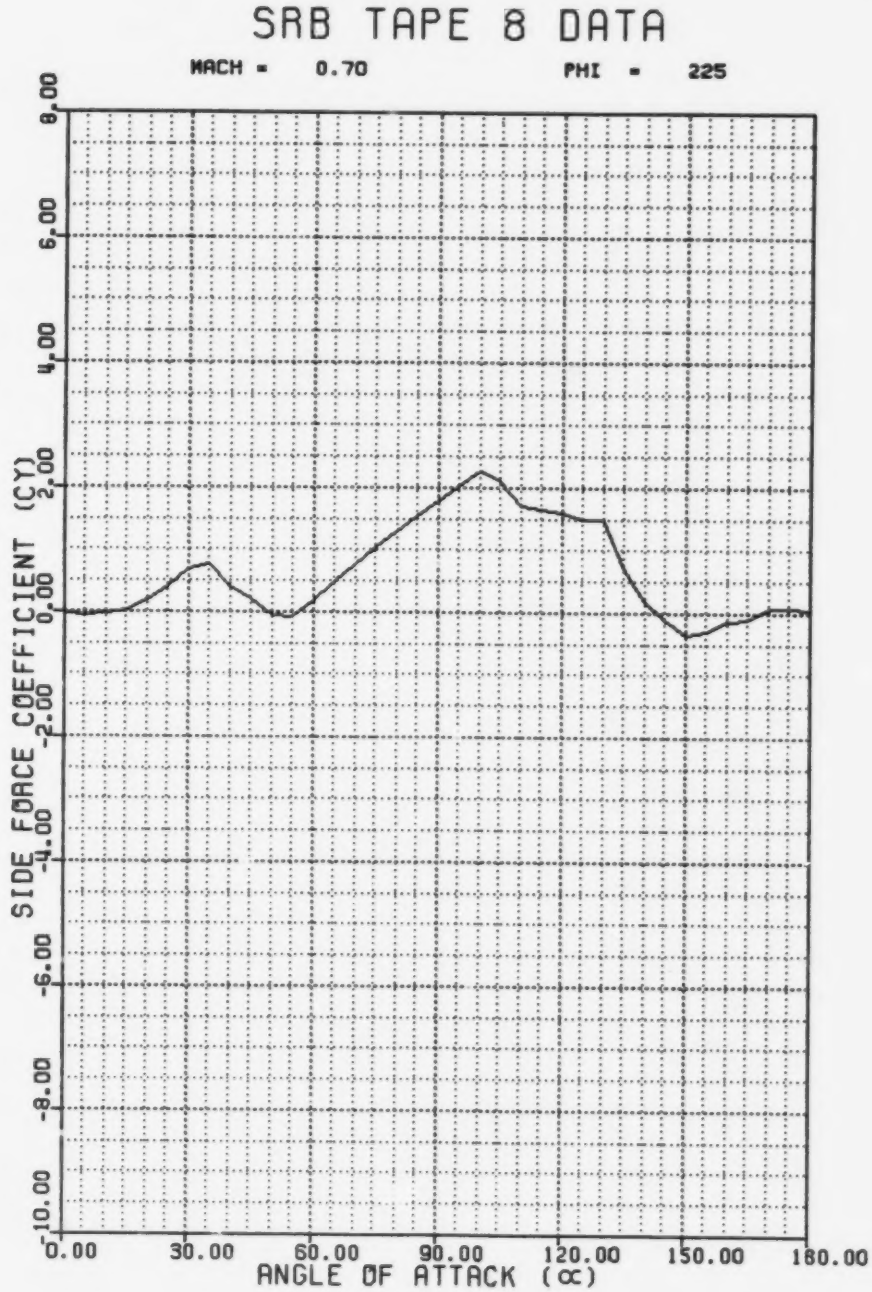
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 225
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4.00
2.00
0.00
-2.00
-4.00
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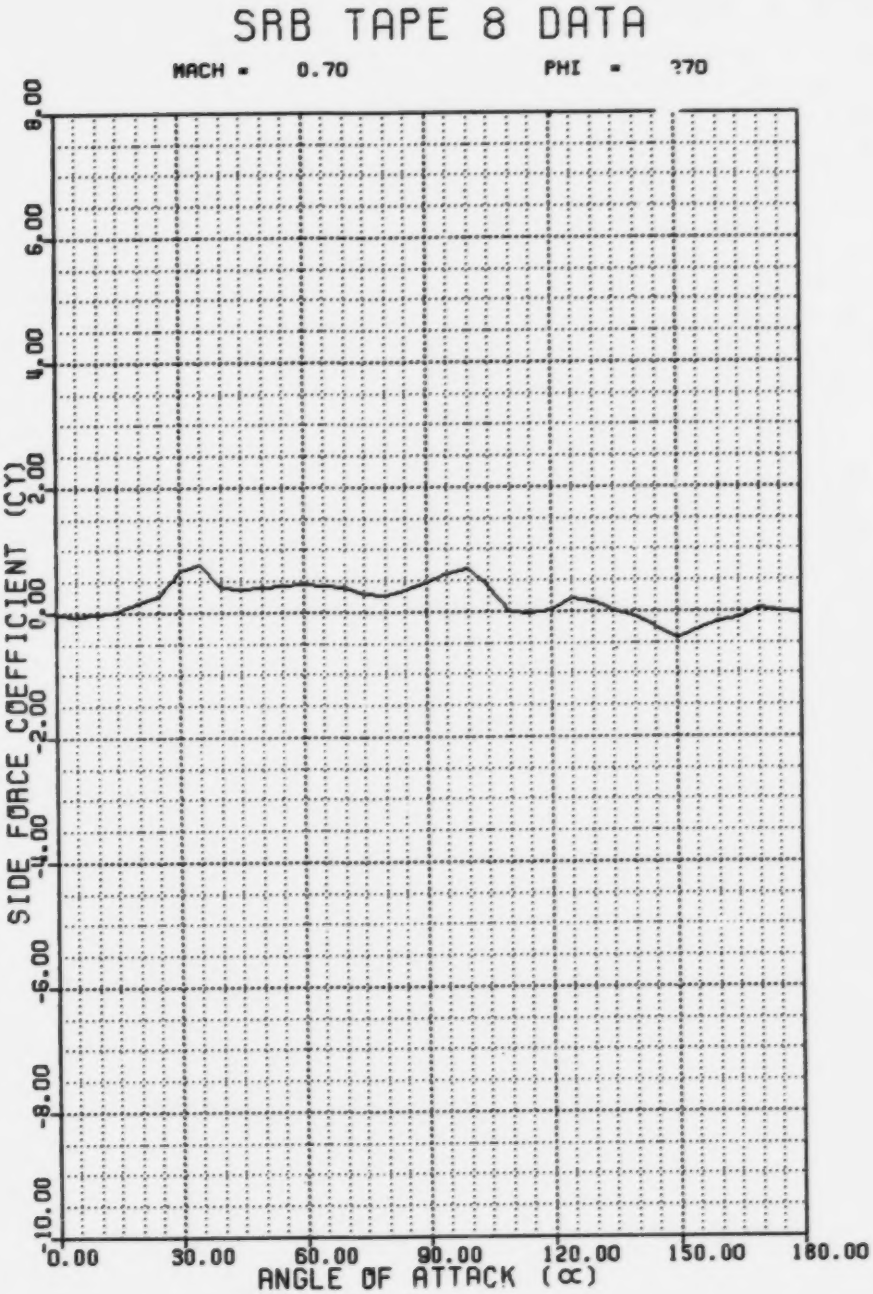
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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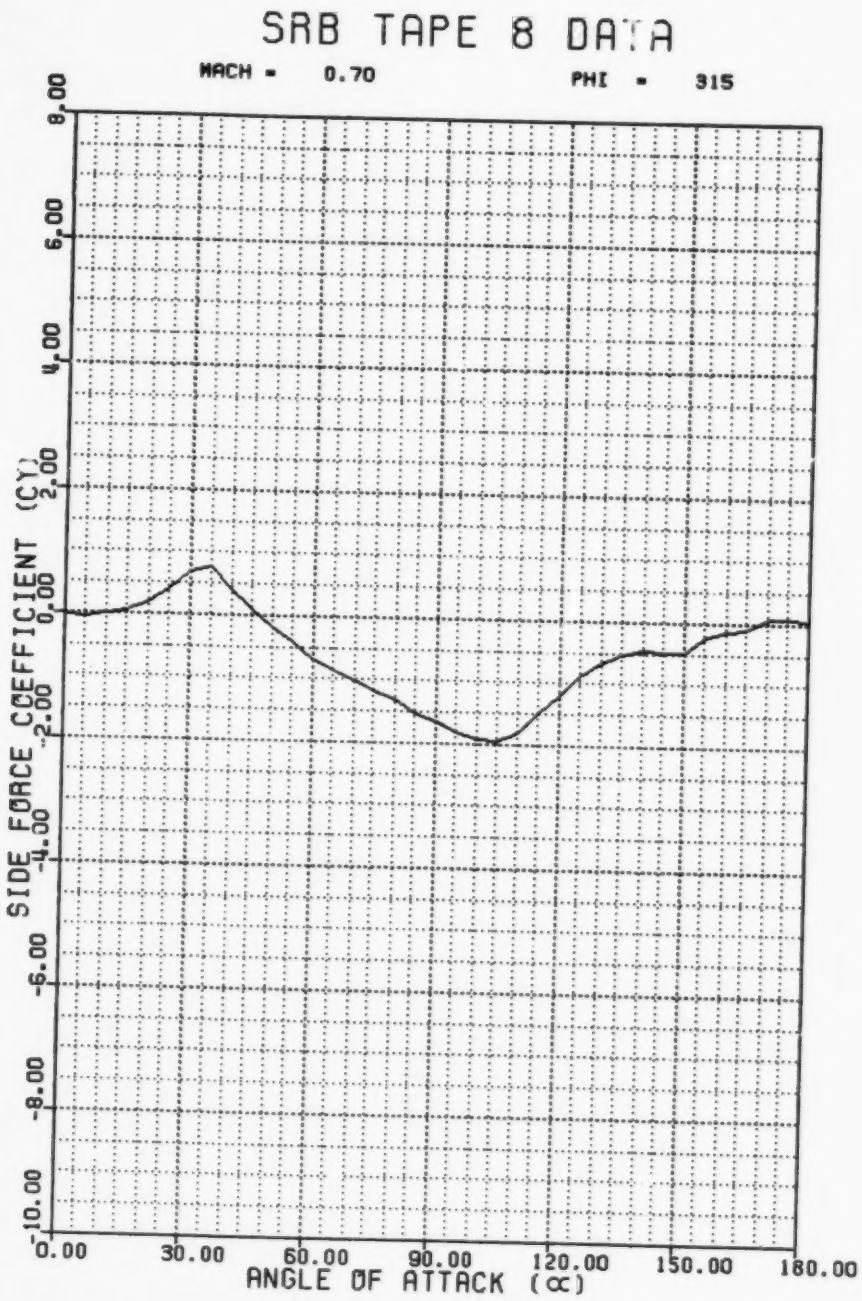
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 315
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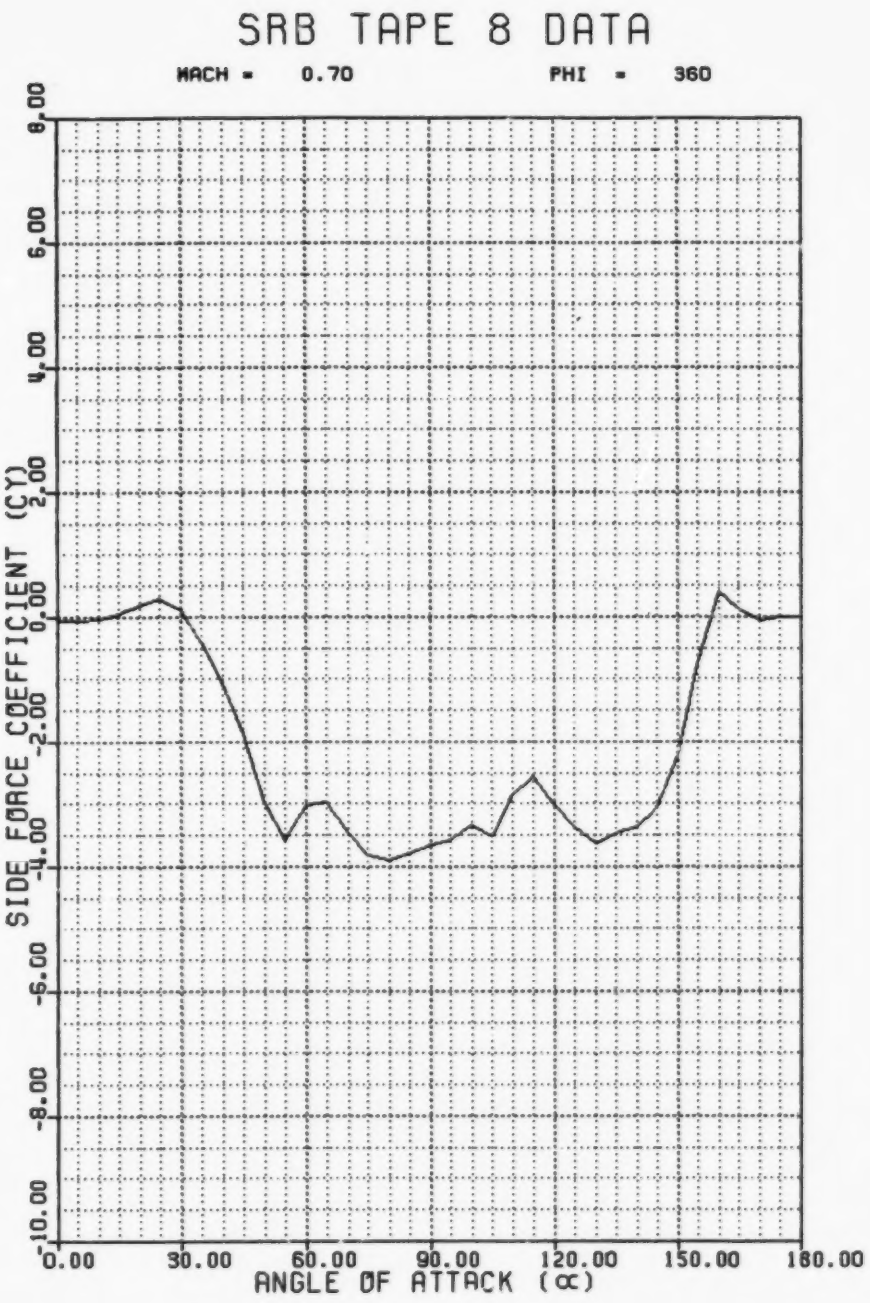
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 360
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4.00
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0.00
-2.00
-4.00
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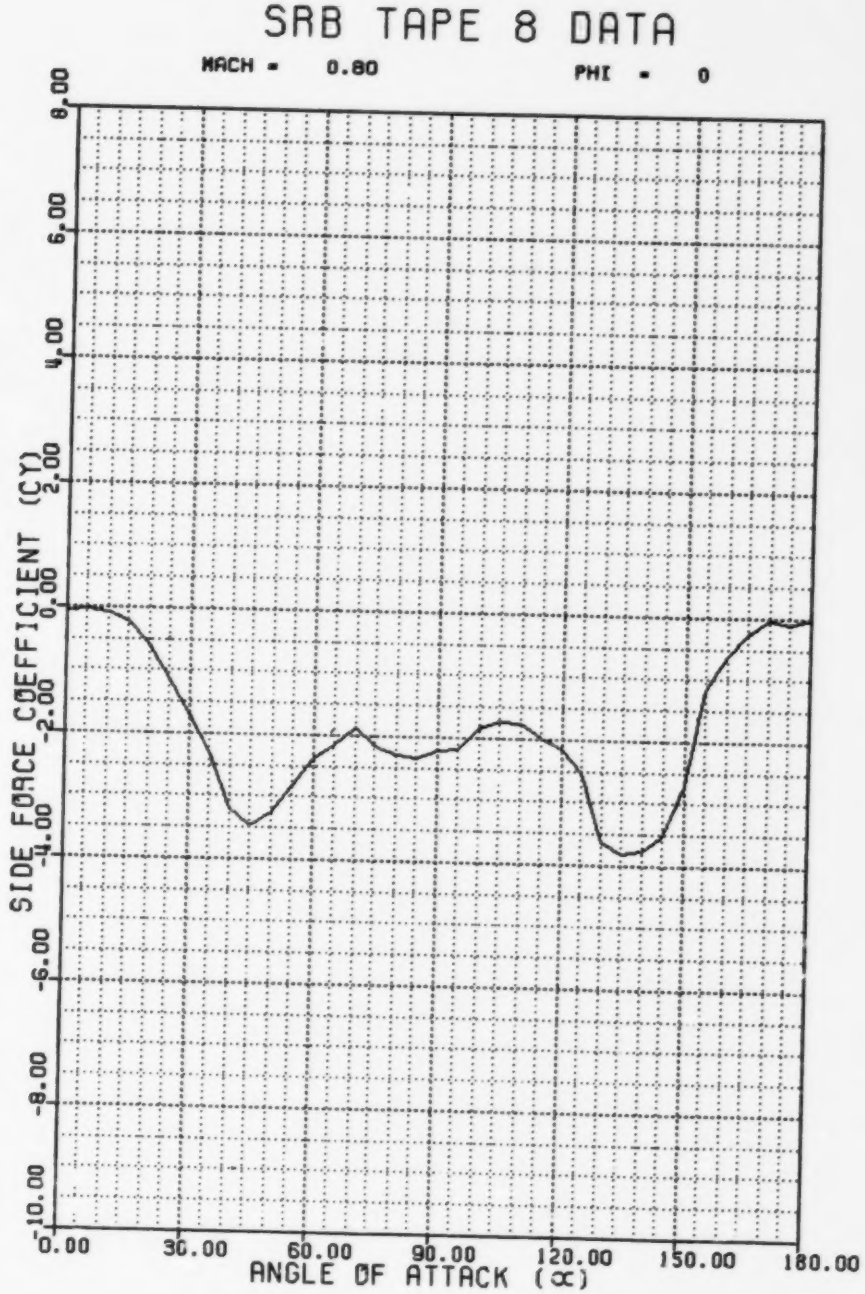
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 0
SIDE FORCE COEFFICIENT (CY)
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2.00
0.00
-2.00
-4.00
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-8.00
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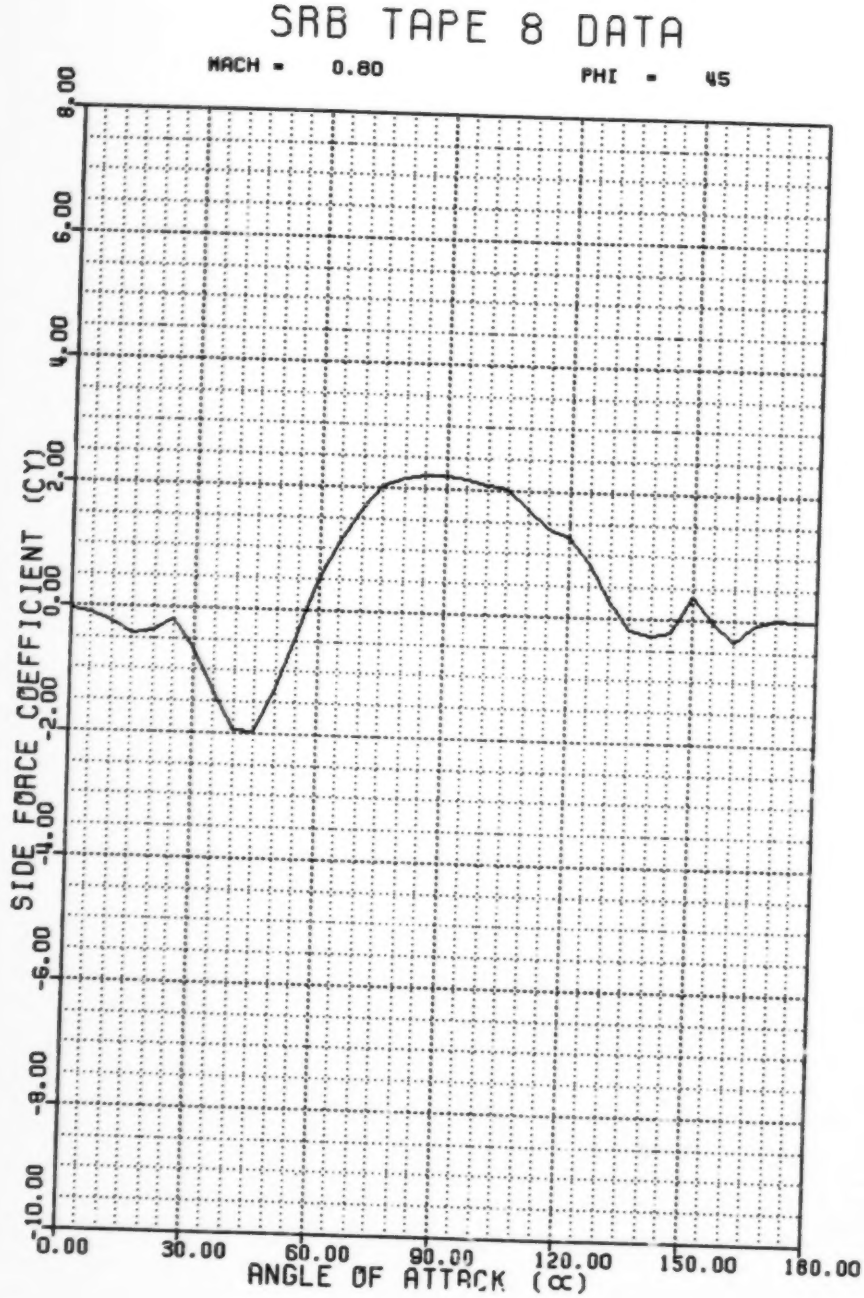
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
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SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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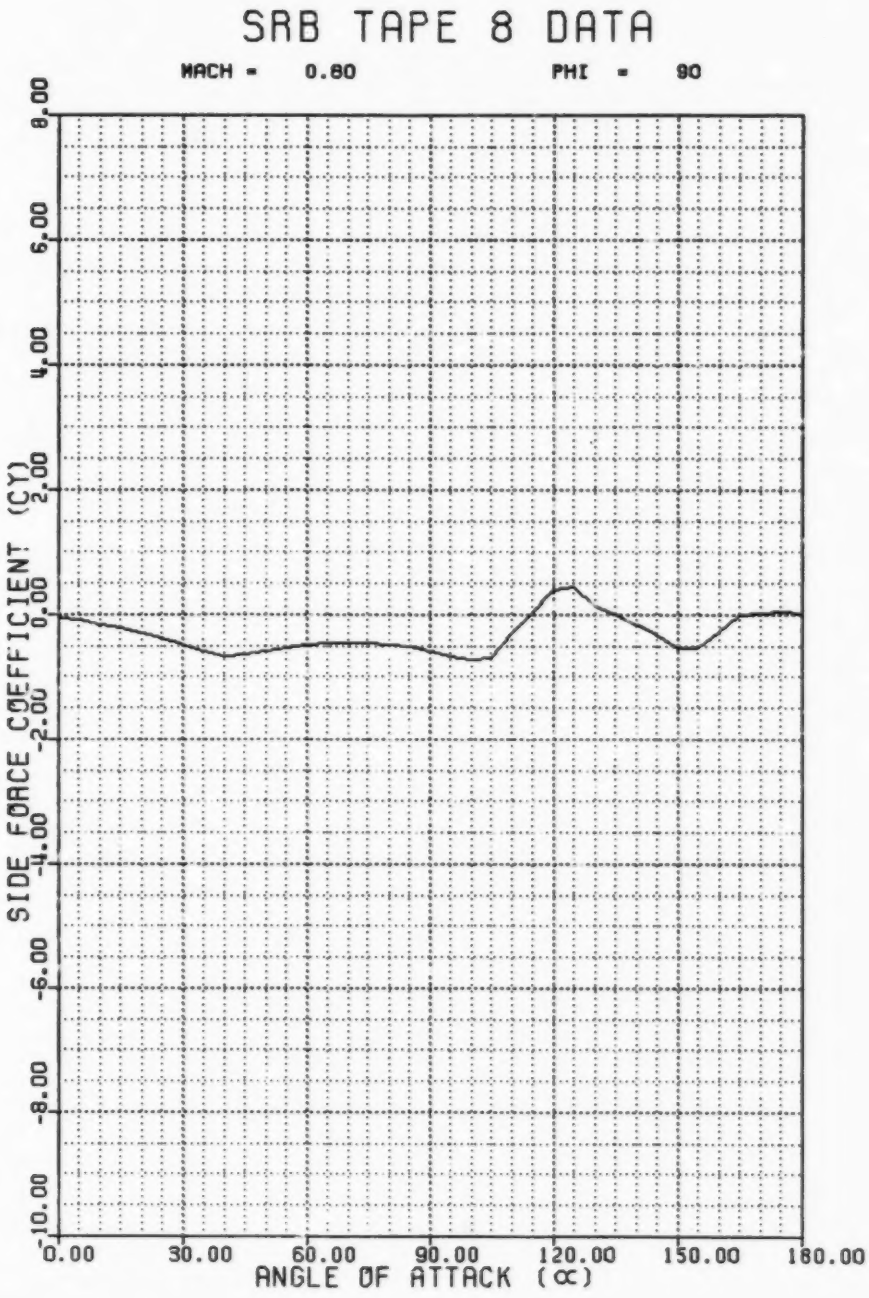
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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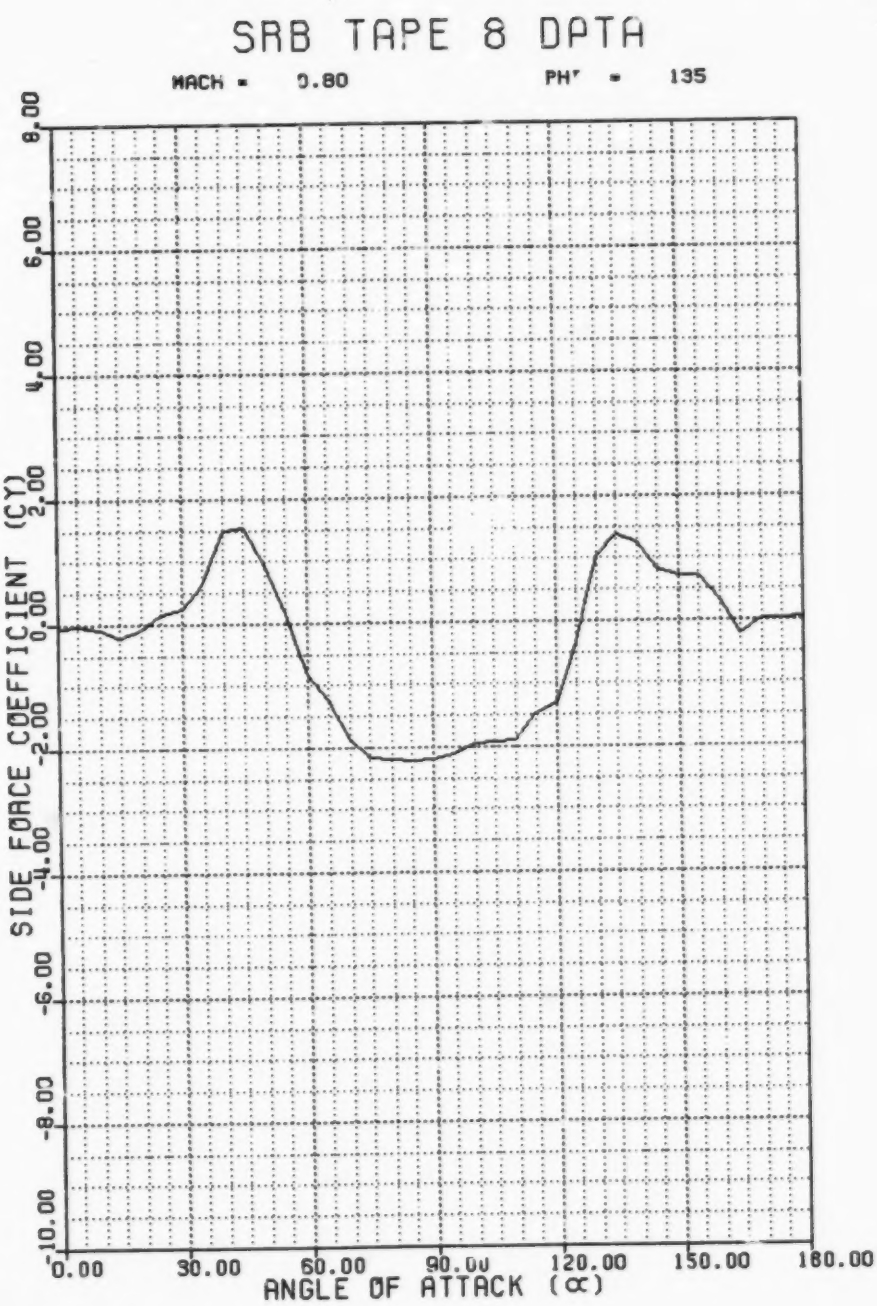
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 135
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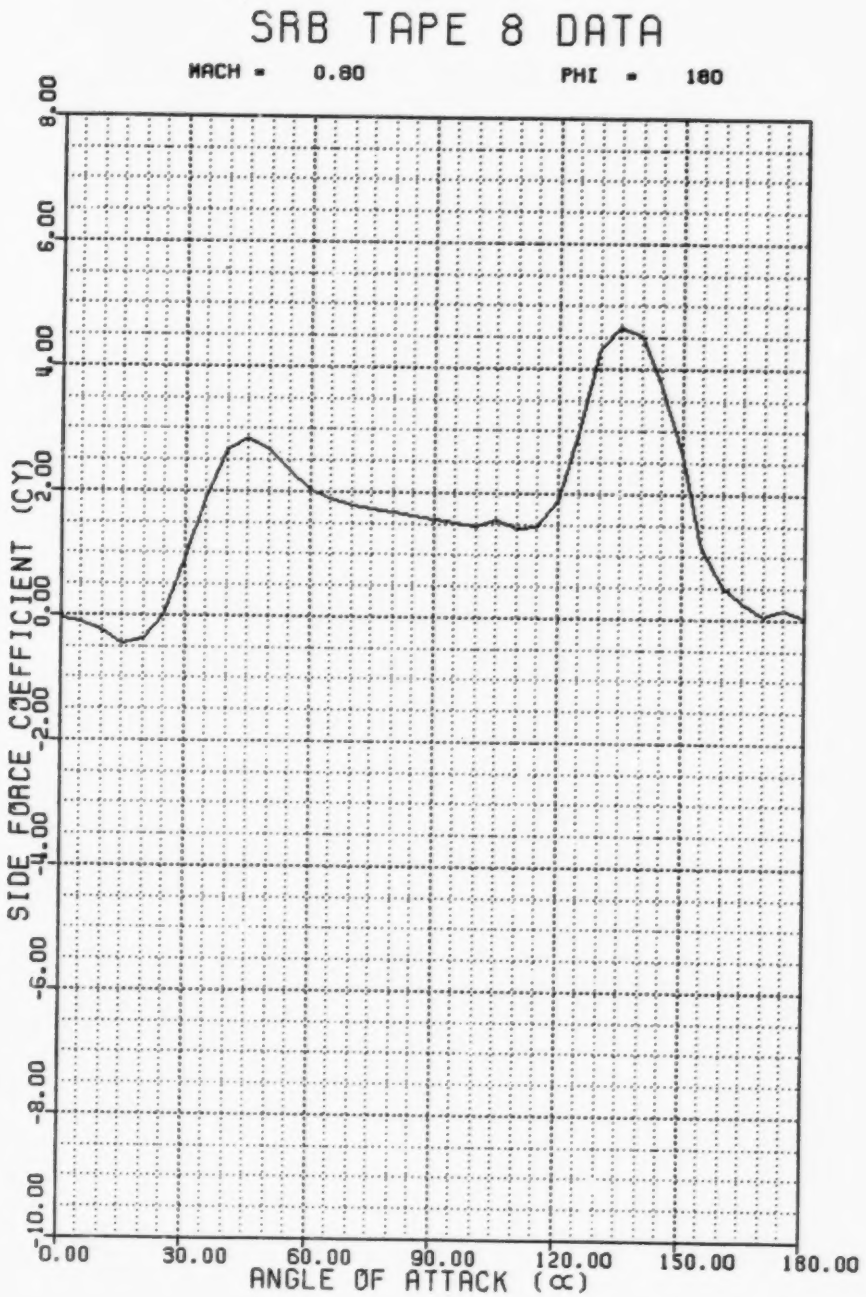
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 180
SIDE FORCE COEFFICIENT (CY)
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4.00
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0.00
-2.00
-4.00
-6.00
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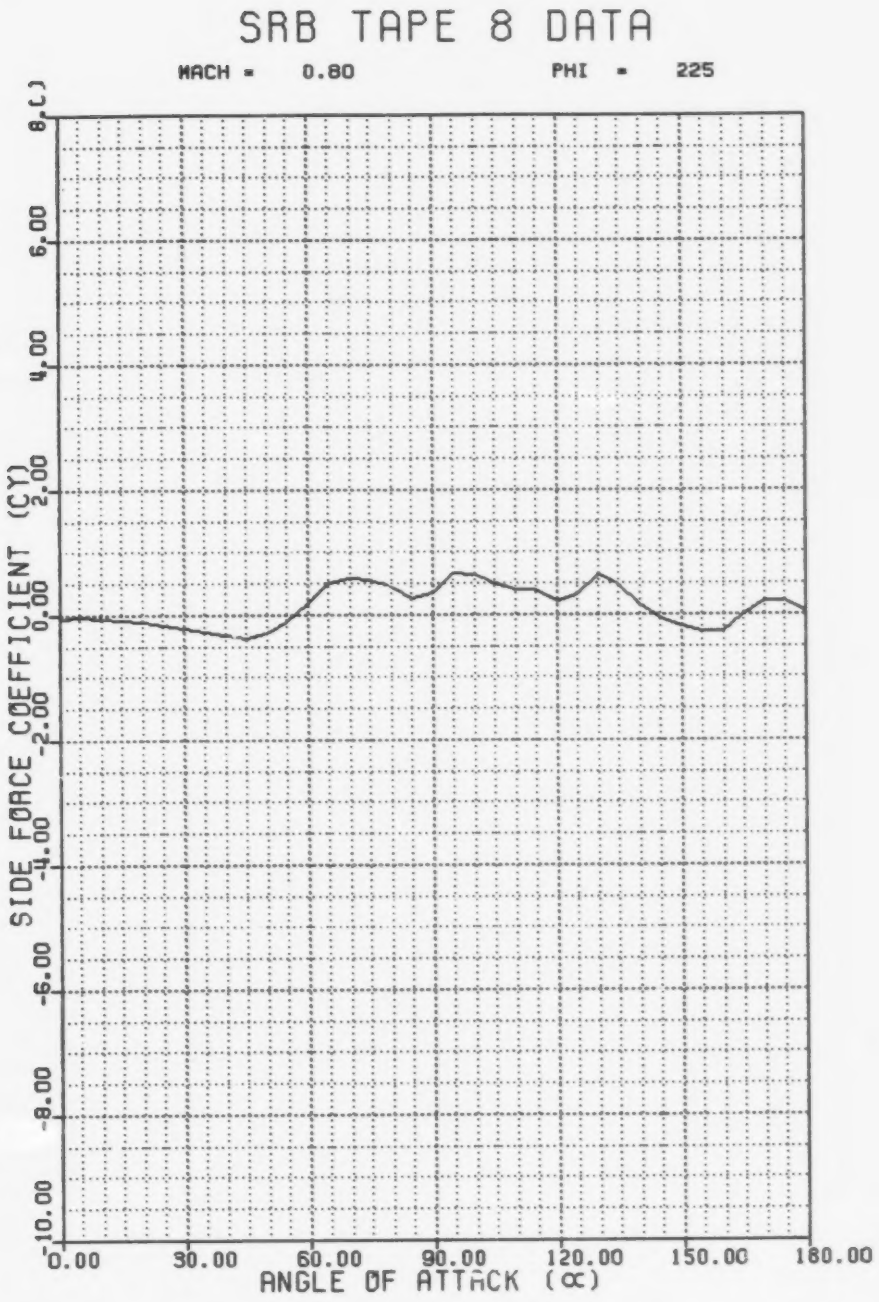
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 225
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-4.00
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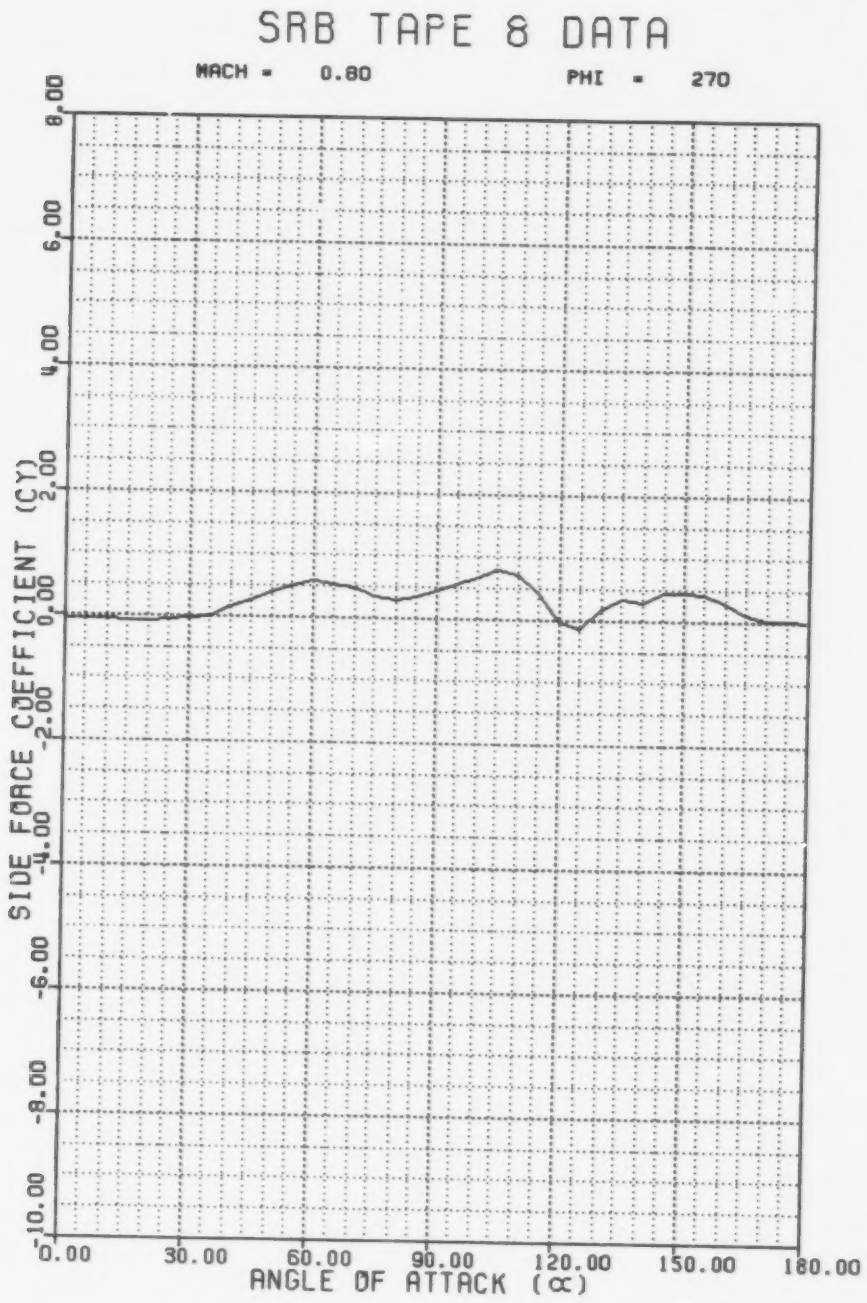
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-4.00
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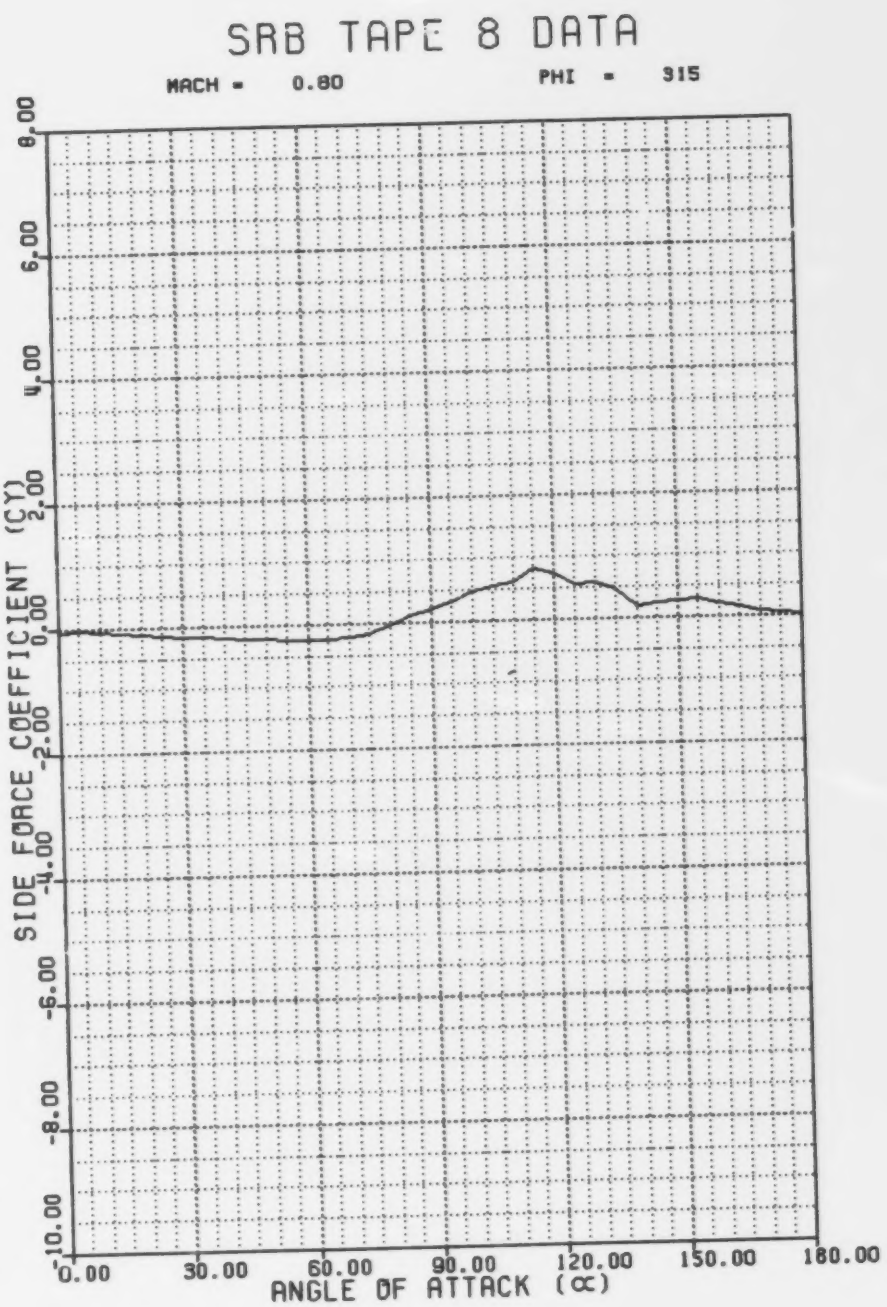
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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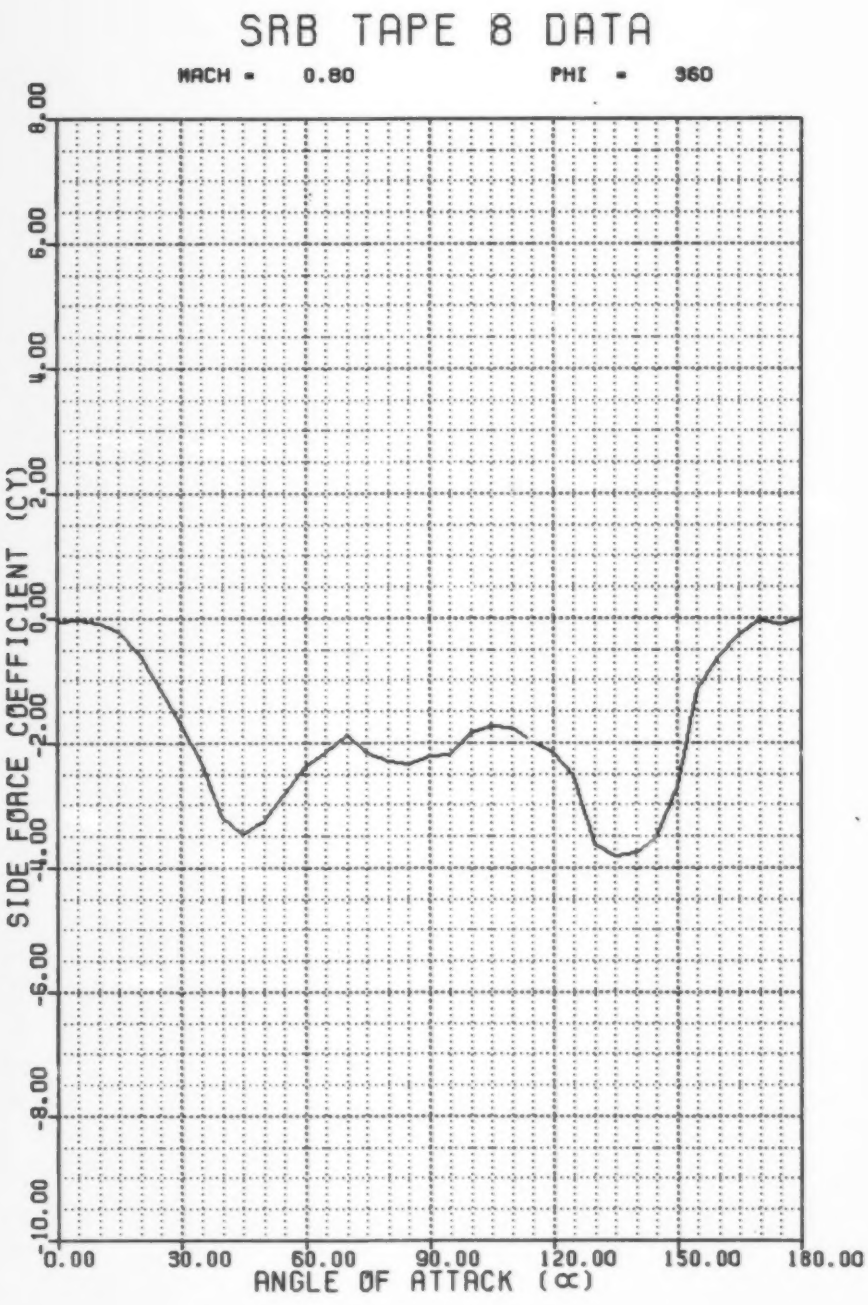
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
-4.00
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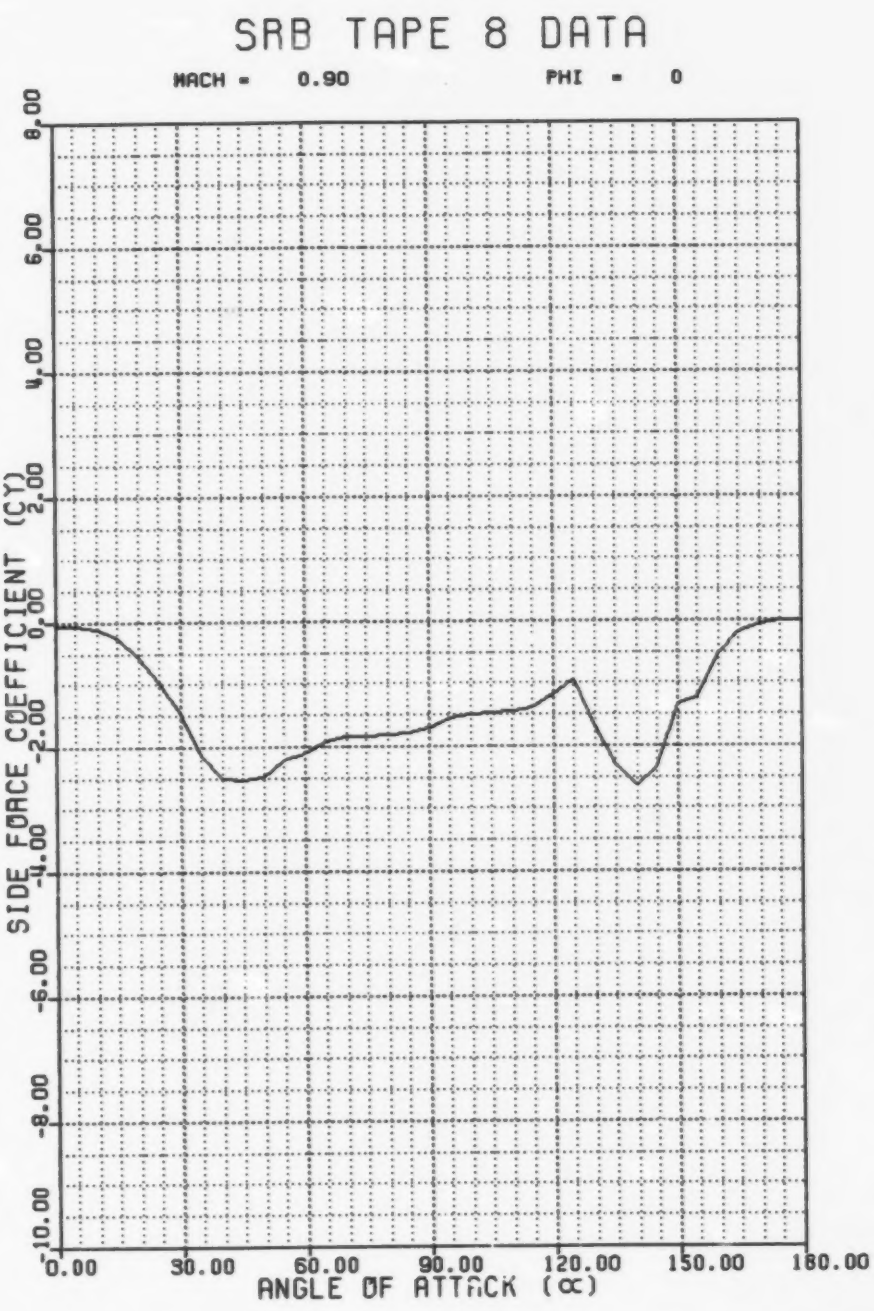
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
-4.00
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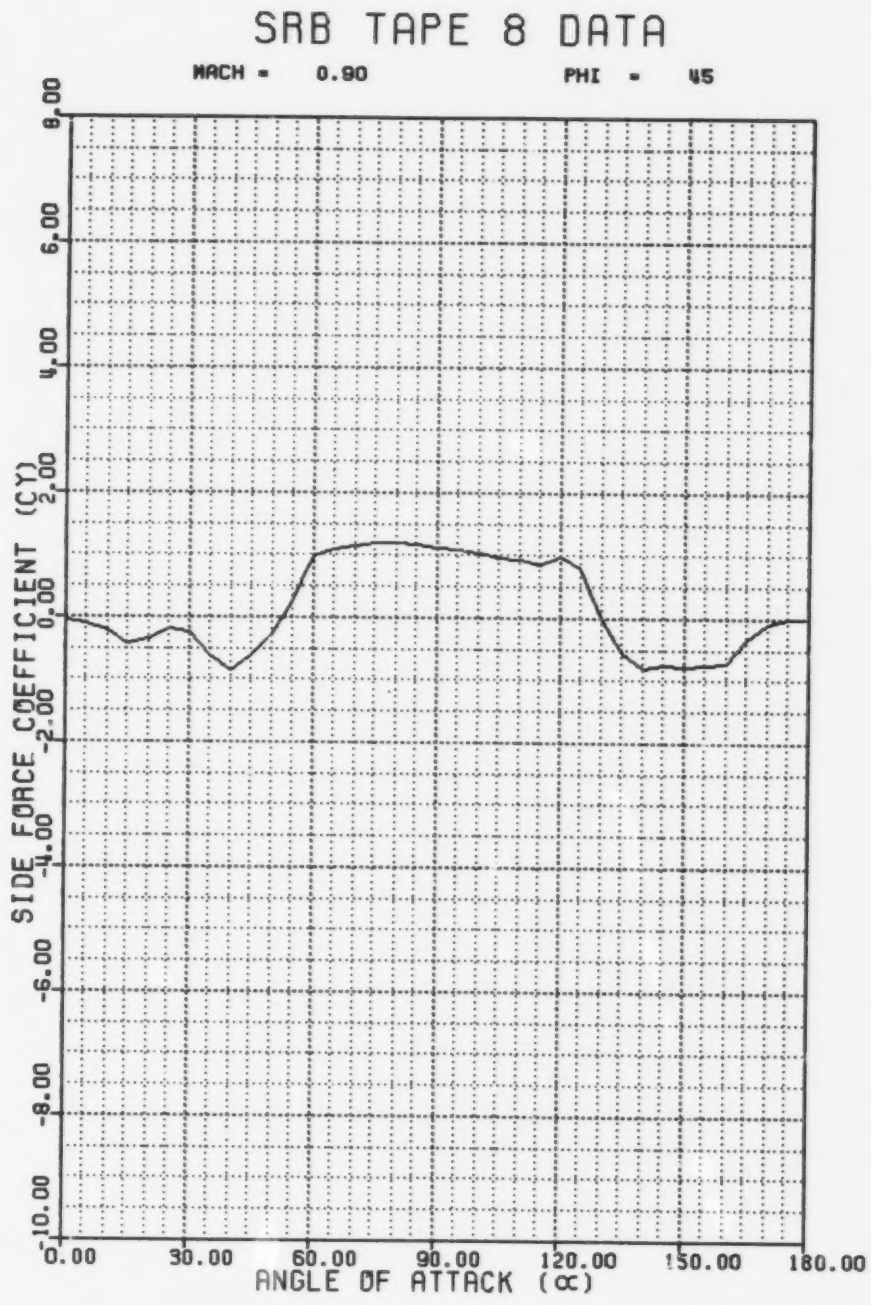
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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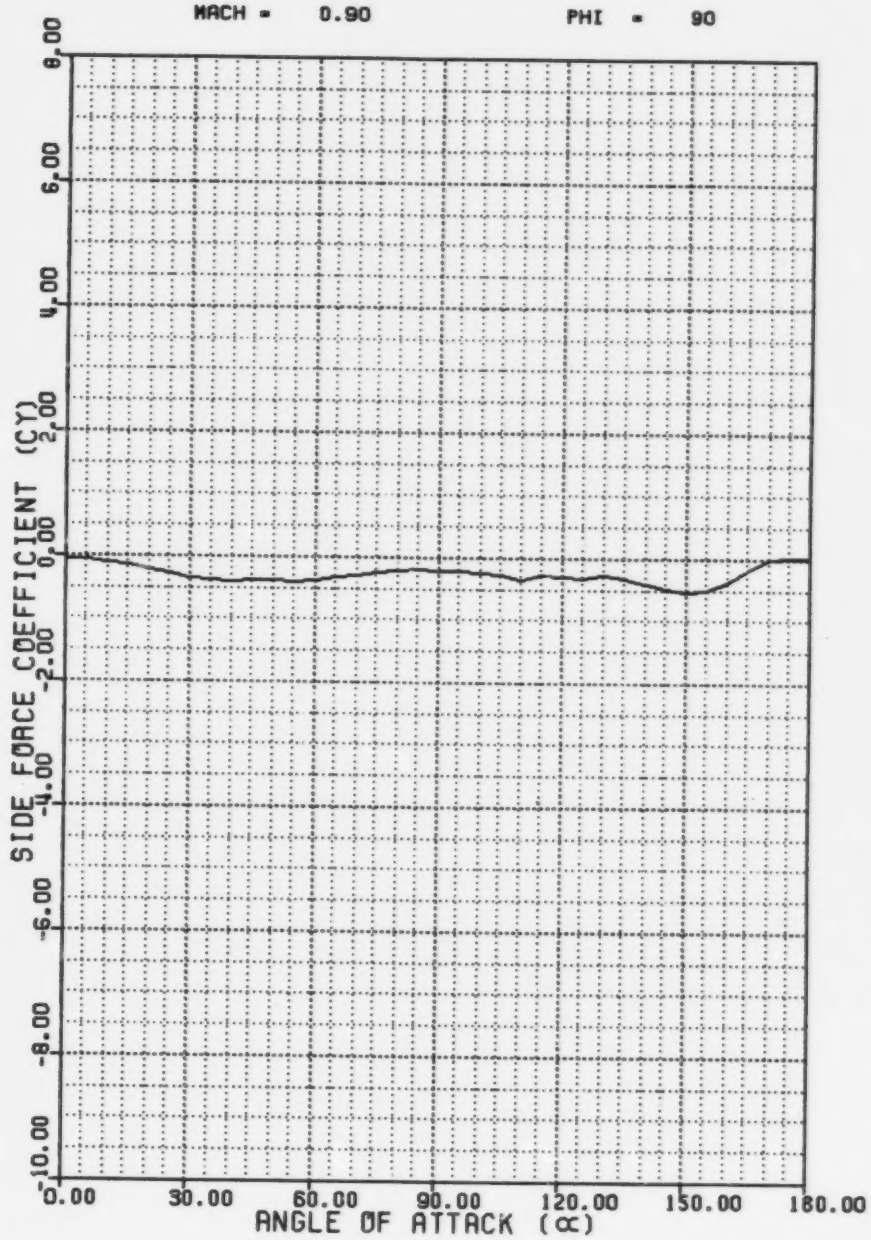
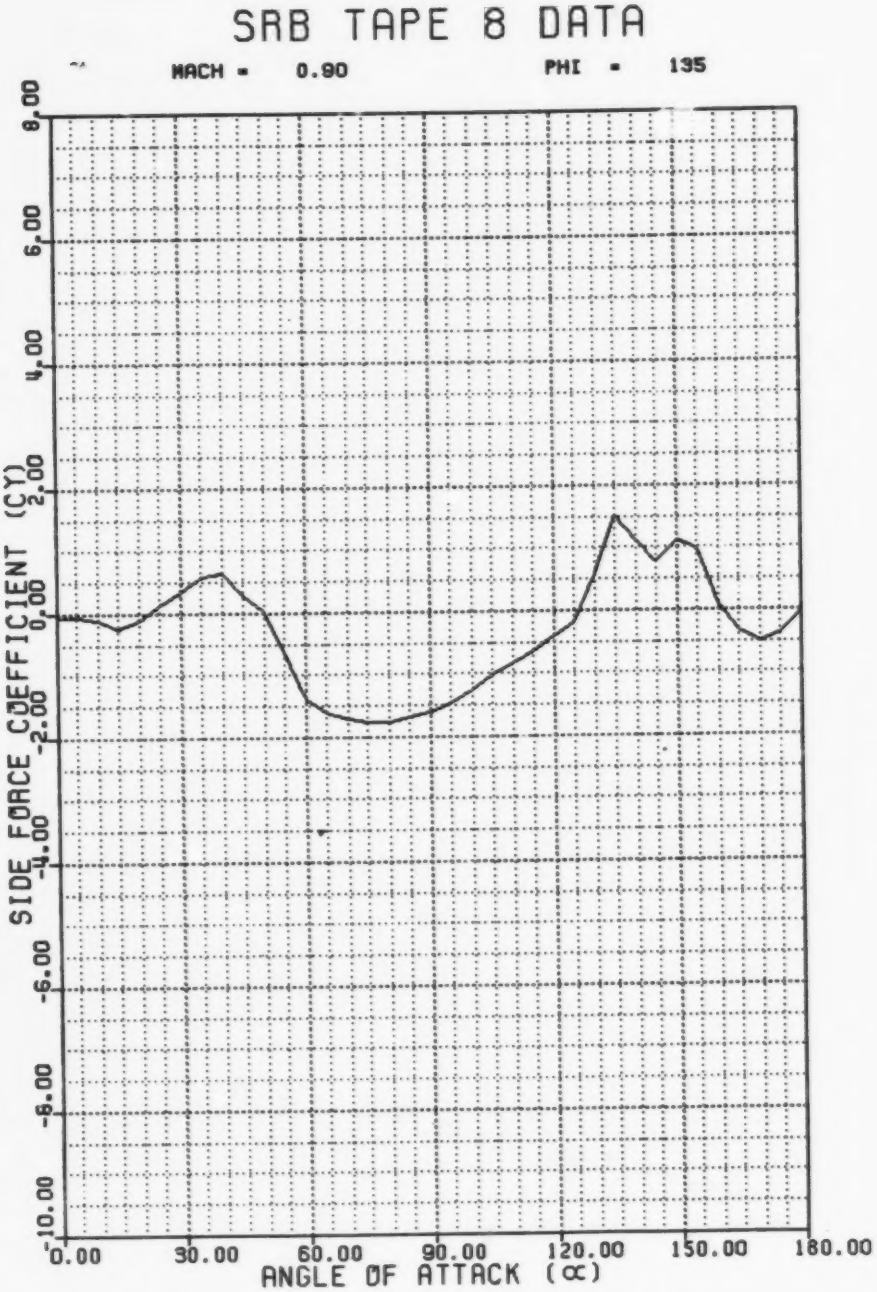
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.90 PHI = 90




SRB TAPE 8 DATA
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SIDE FORCE COEFFICIENT (CY)
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2.00
0.00
-2.00
-4.00
-6.00
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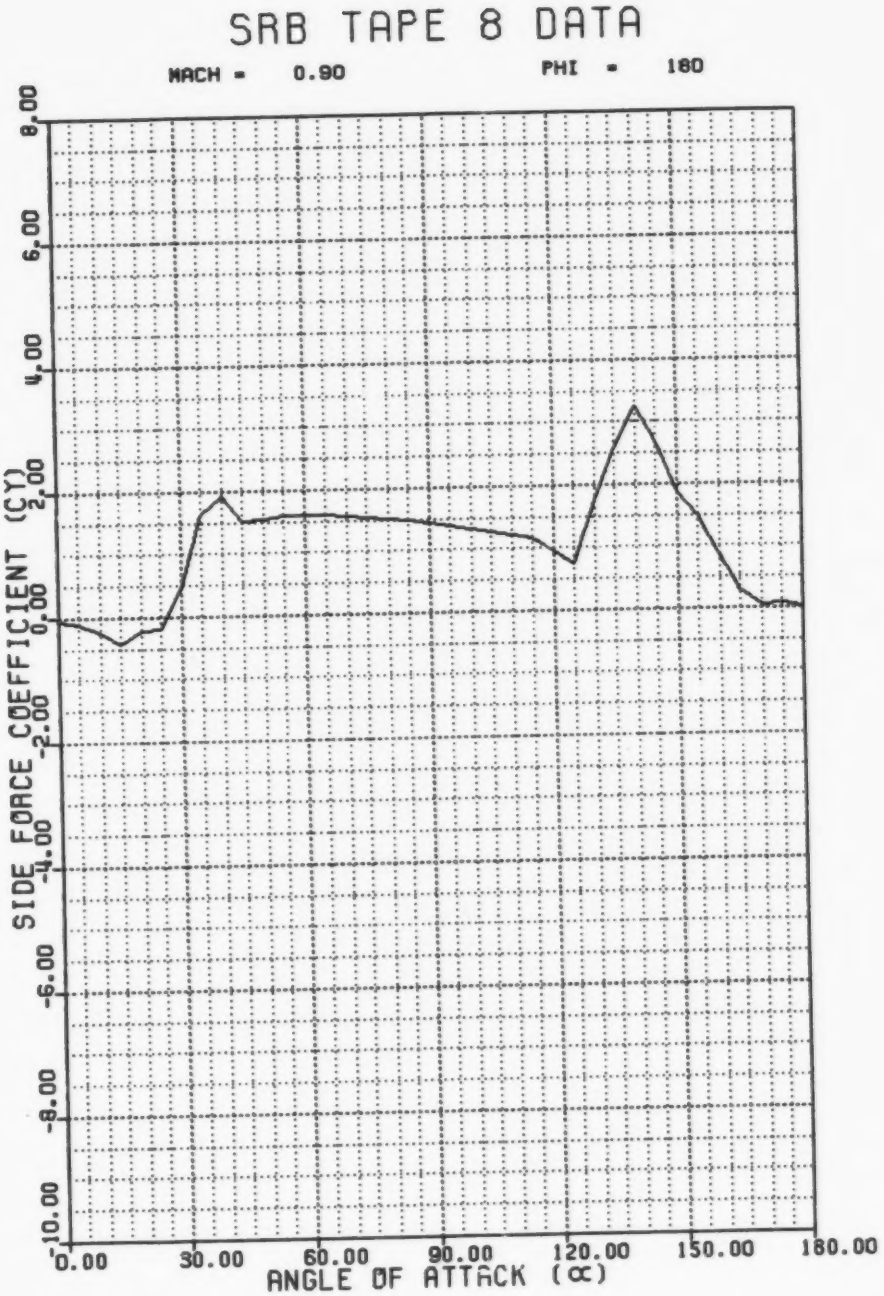
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 180
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
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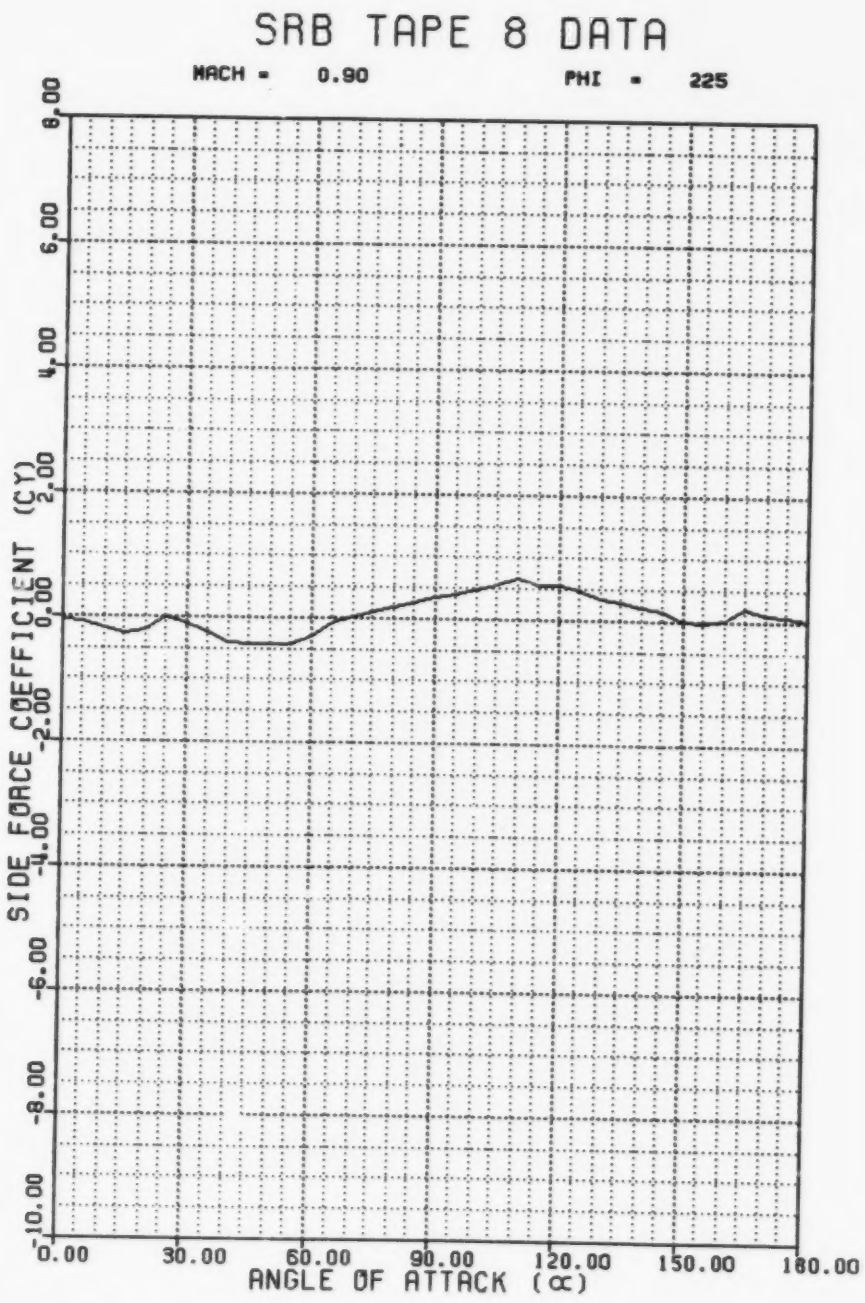
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 225
SIDE FORCE COEFFICIENT (CY)
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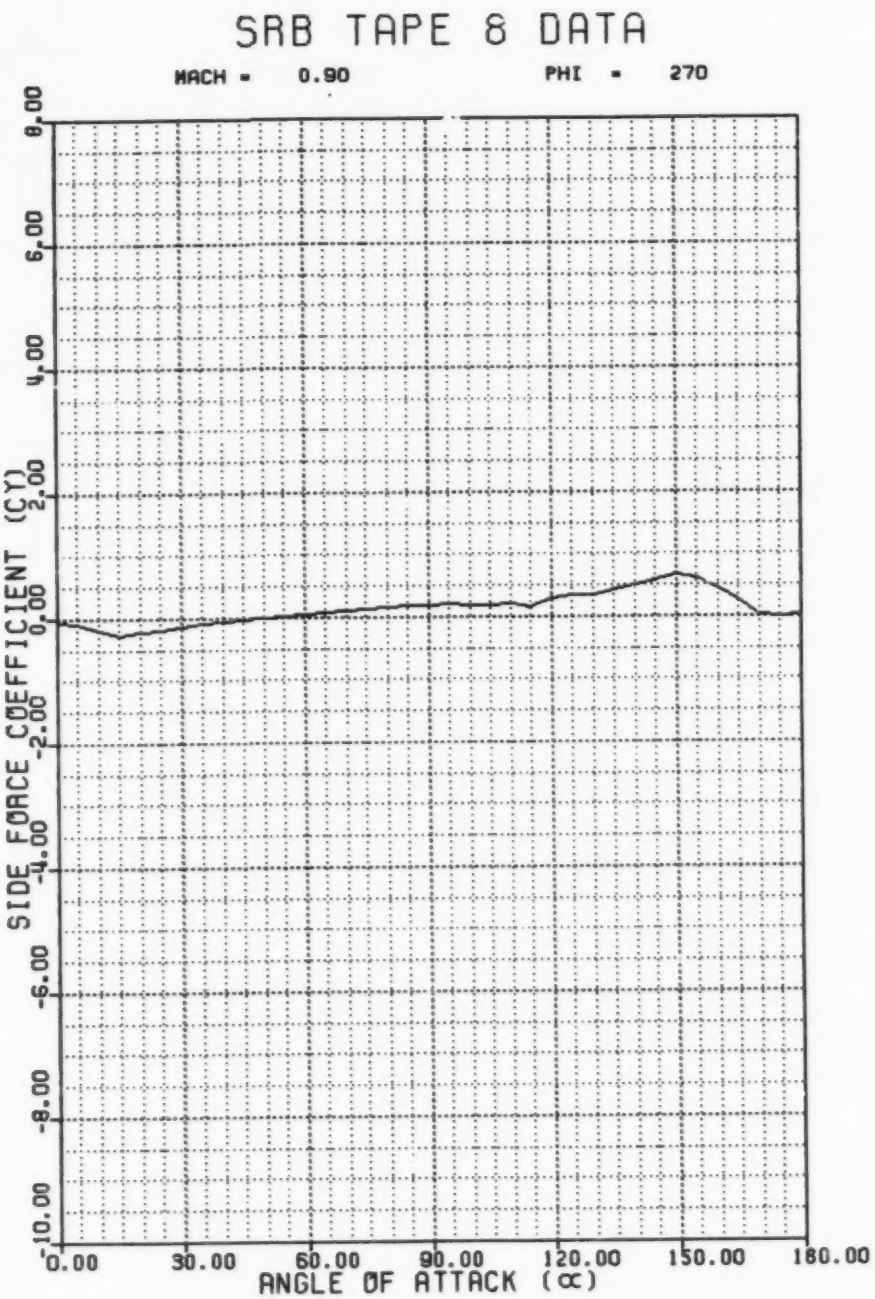
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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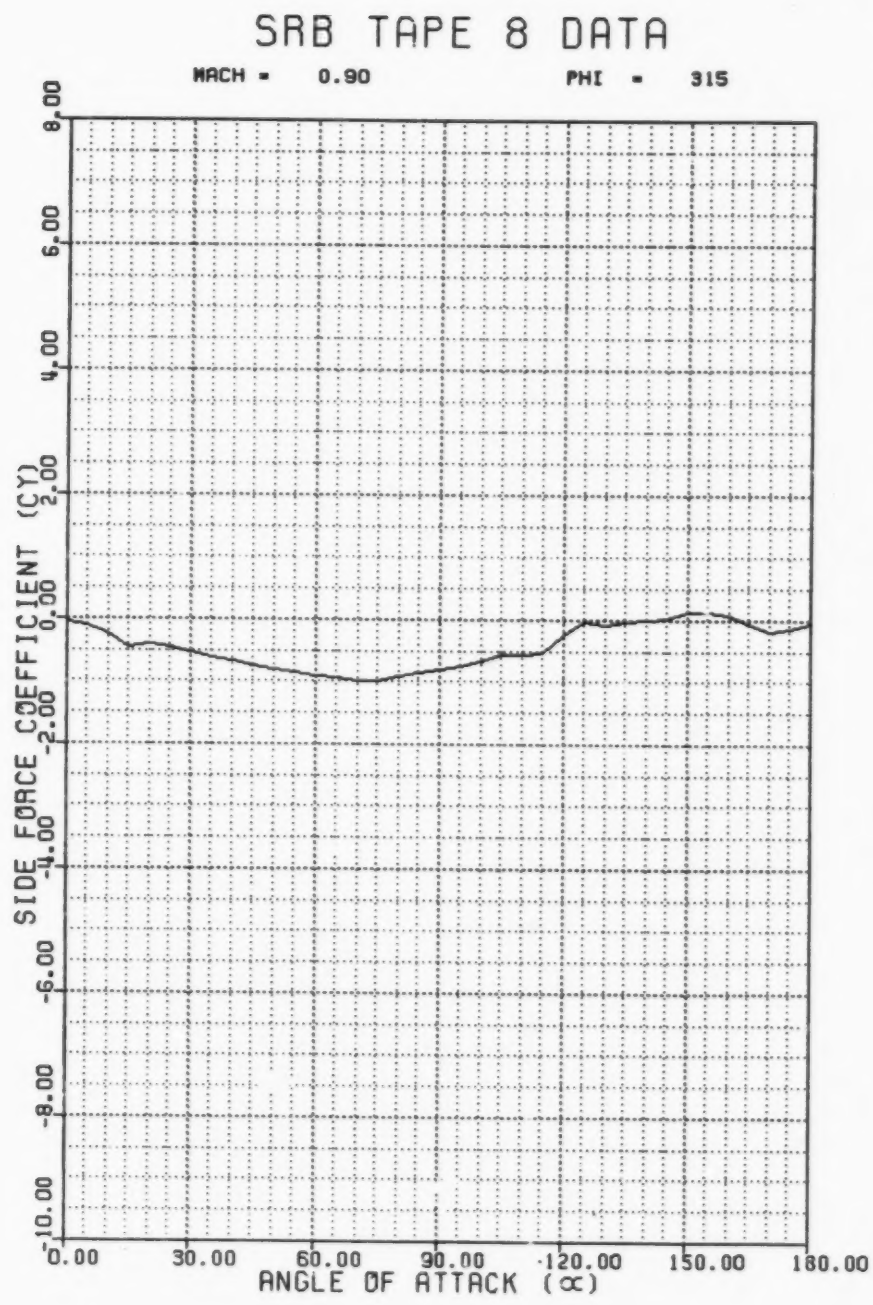
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 315
SIDE FORCE COEFFICIENT (CY)
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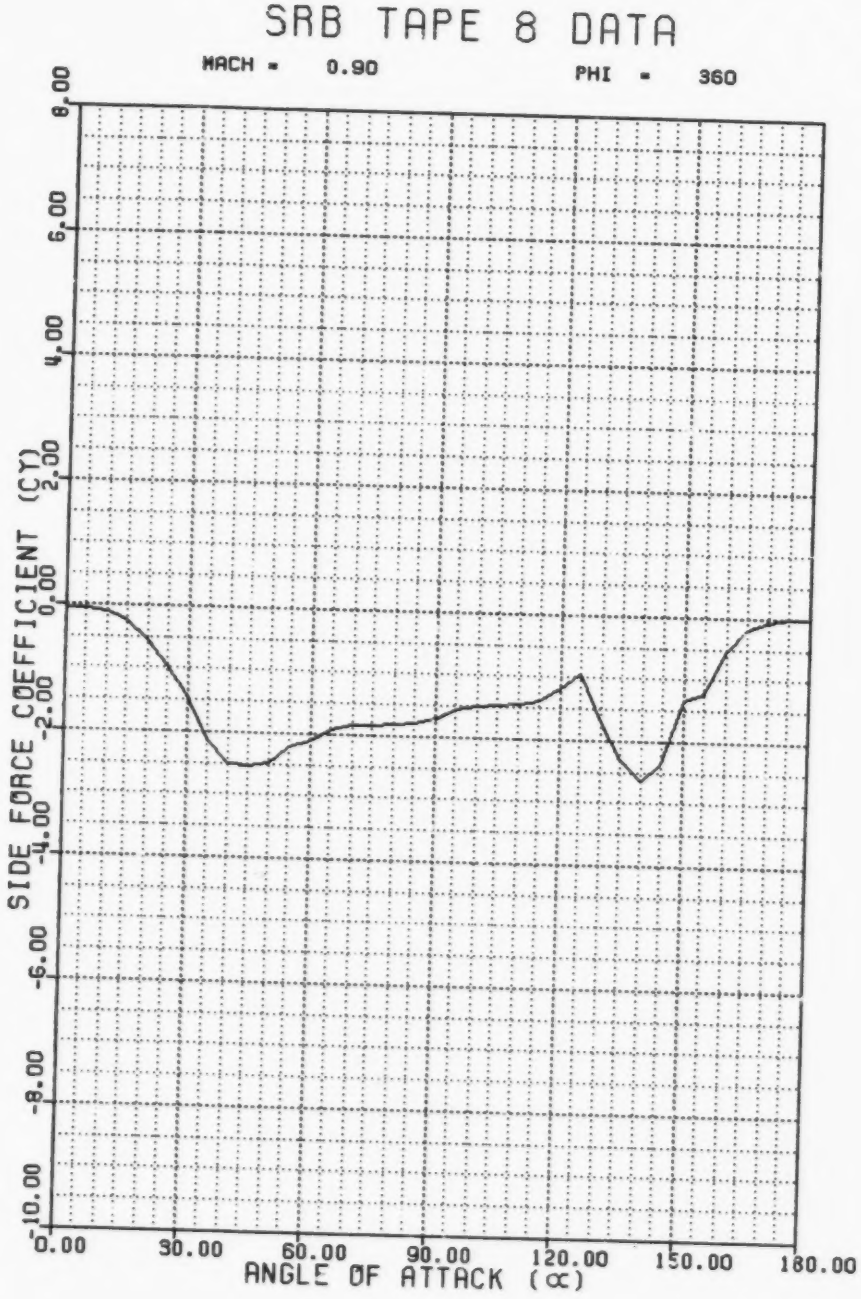
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (∝)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 360
SIDE FORCE COEFFICIENT (CY)
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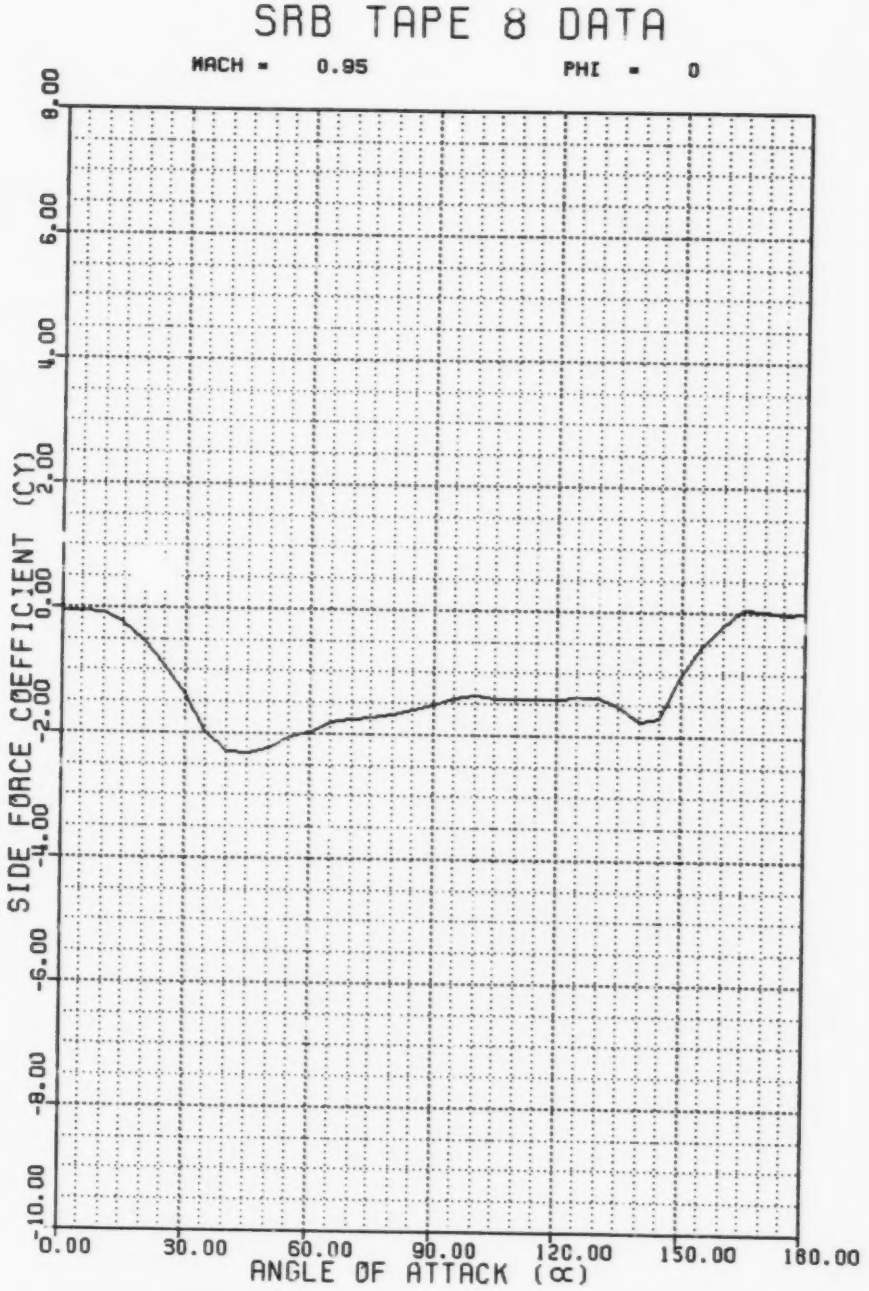
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 0
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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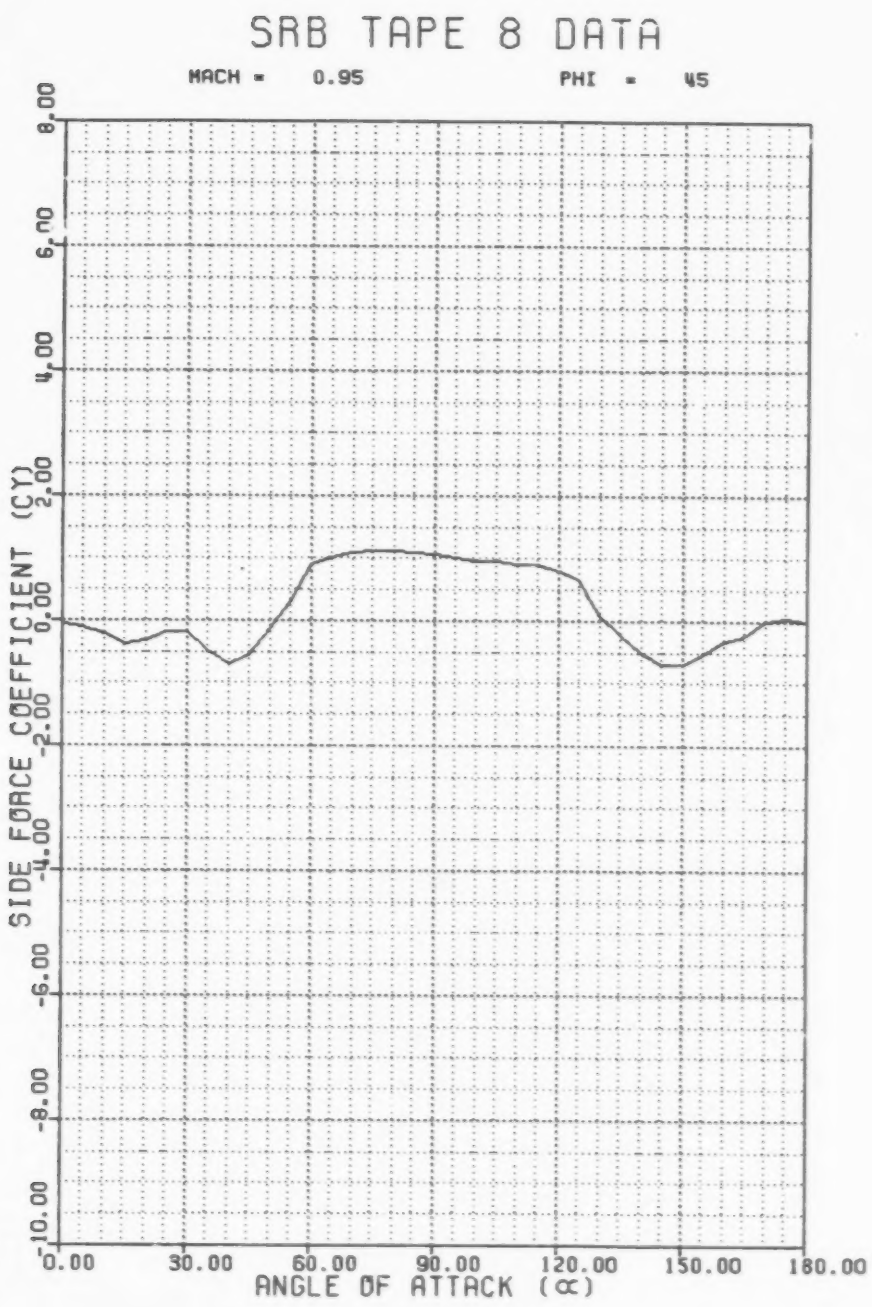
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 45
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
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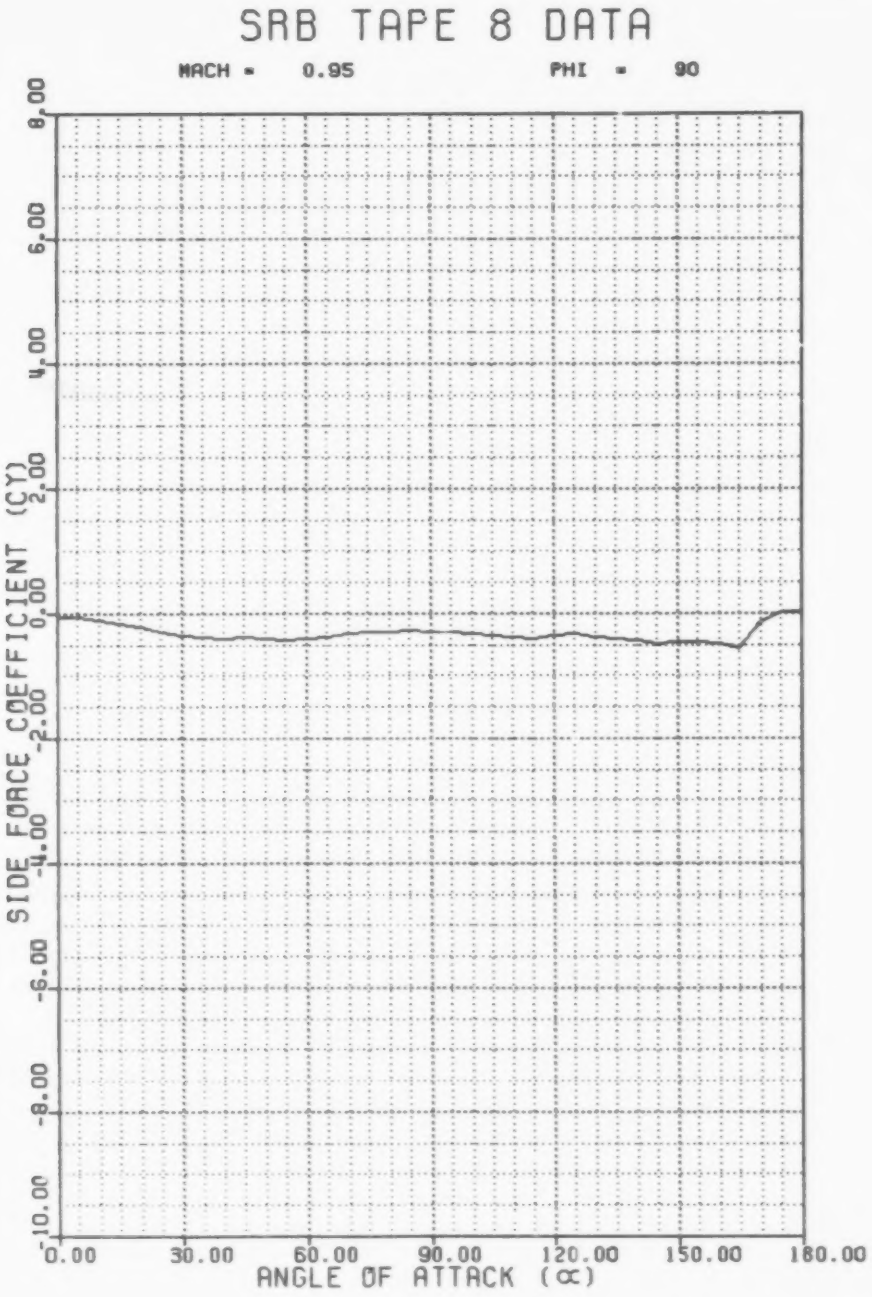
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 90
SIDE FORCE COEFFICIENT (CY)
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2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
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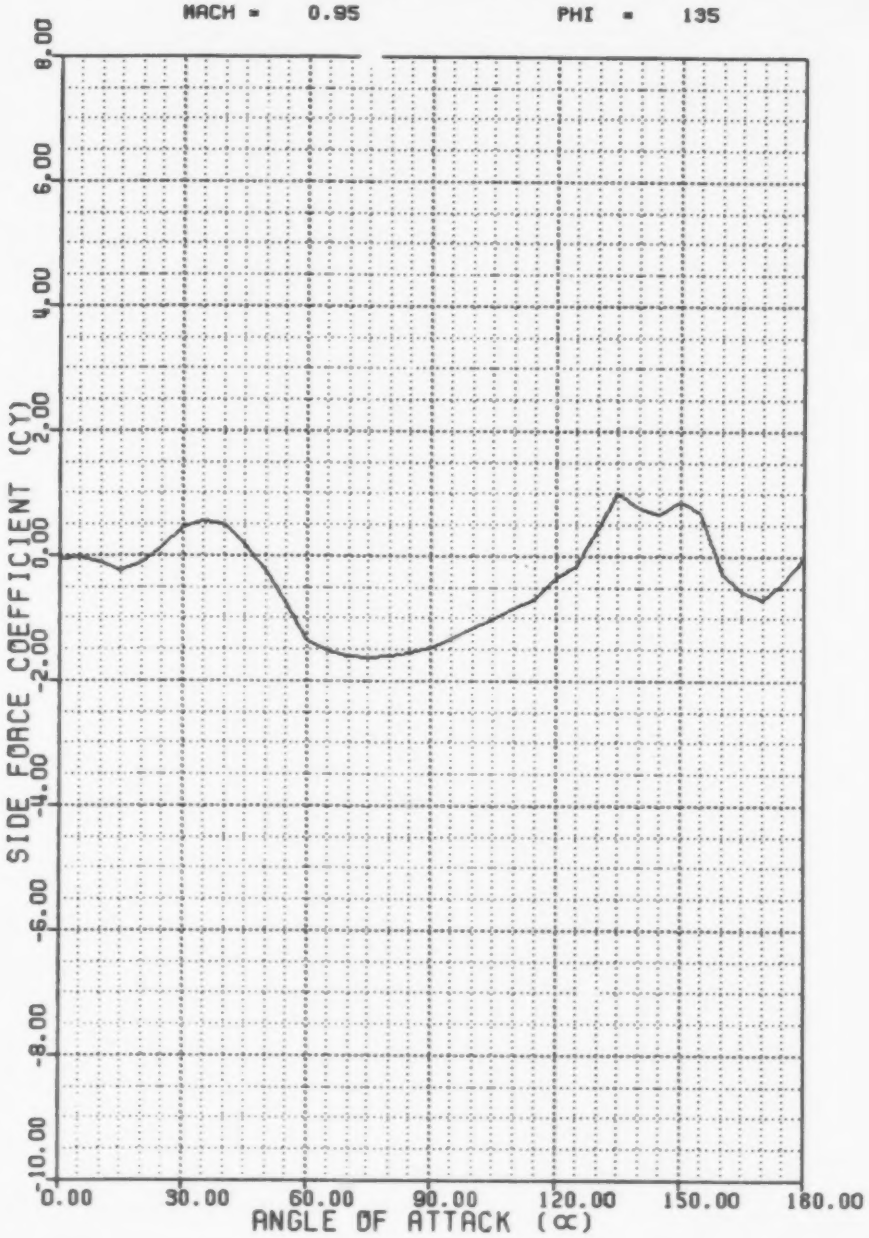
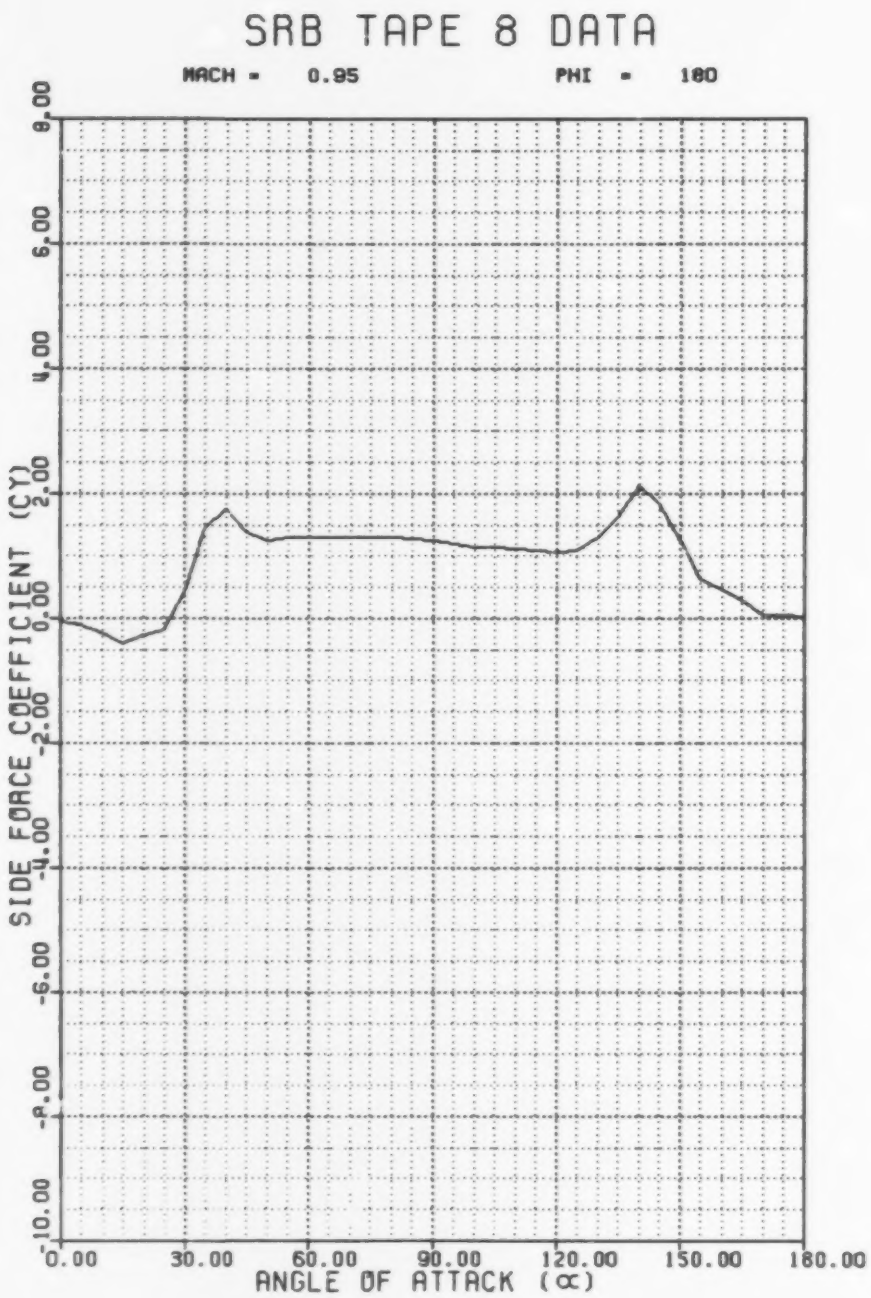
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.95 PHI = 135




SRB TAPE 8 DATA
MACH = 0.95
PHI = 180
SIDE FORCE COEFFICIENT (CY)
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4.00
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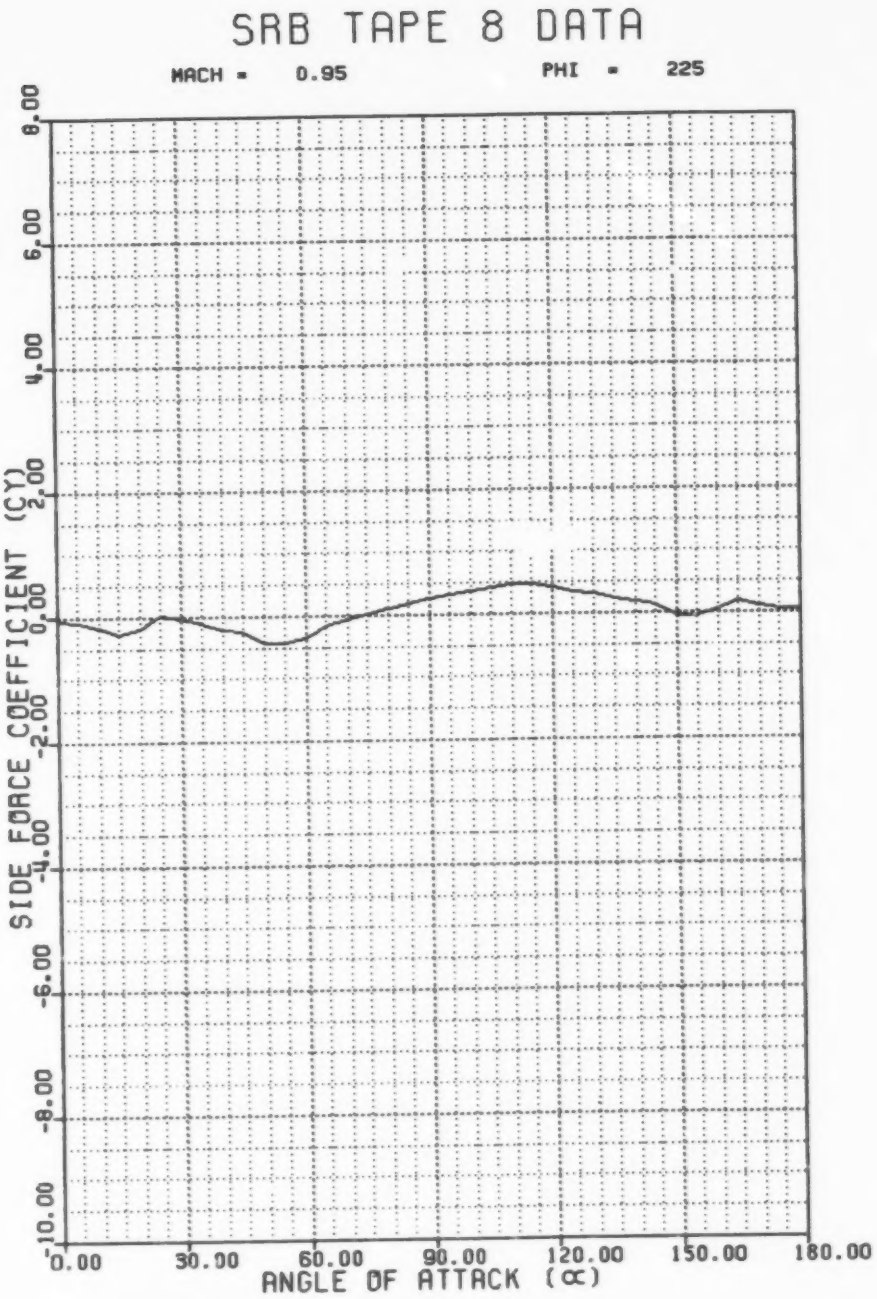
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 225
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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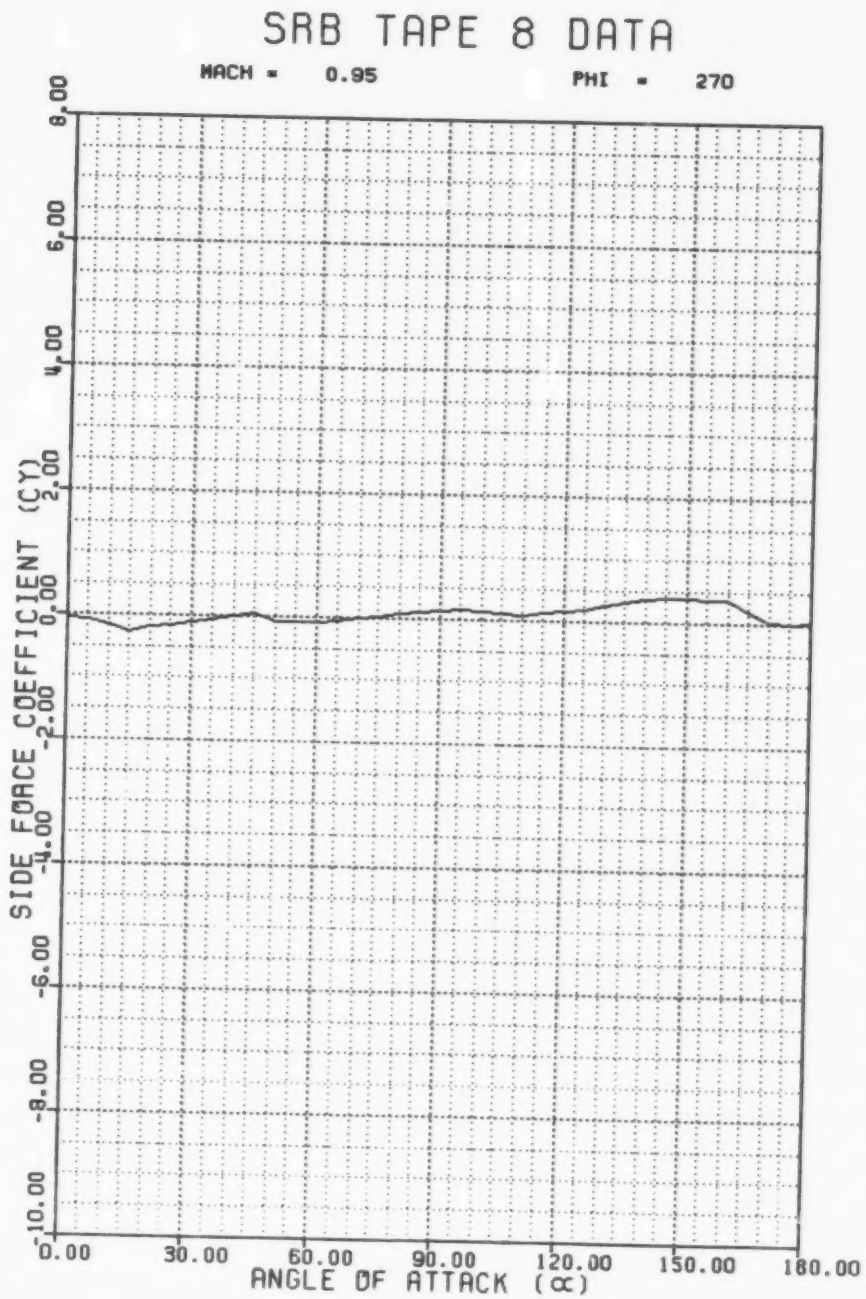
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
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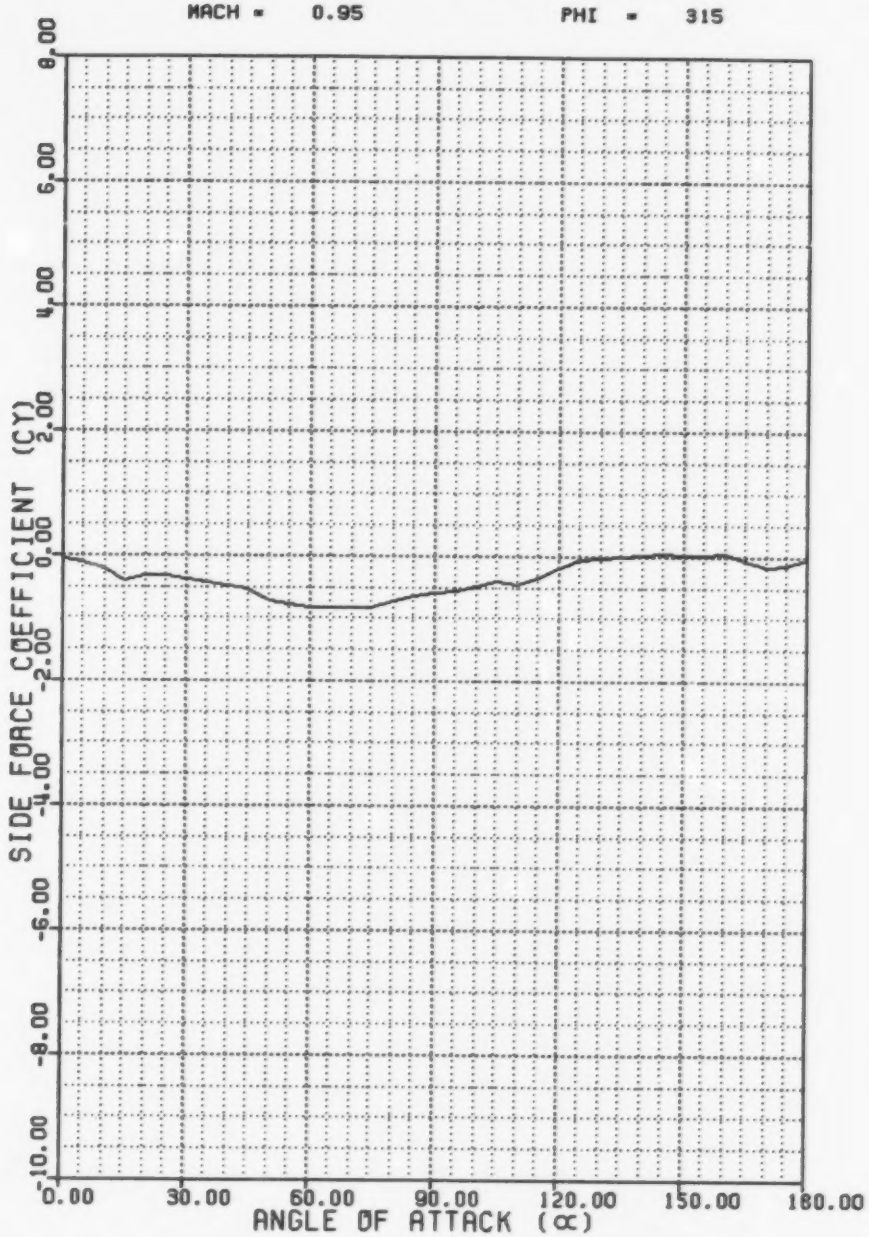
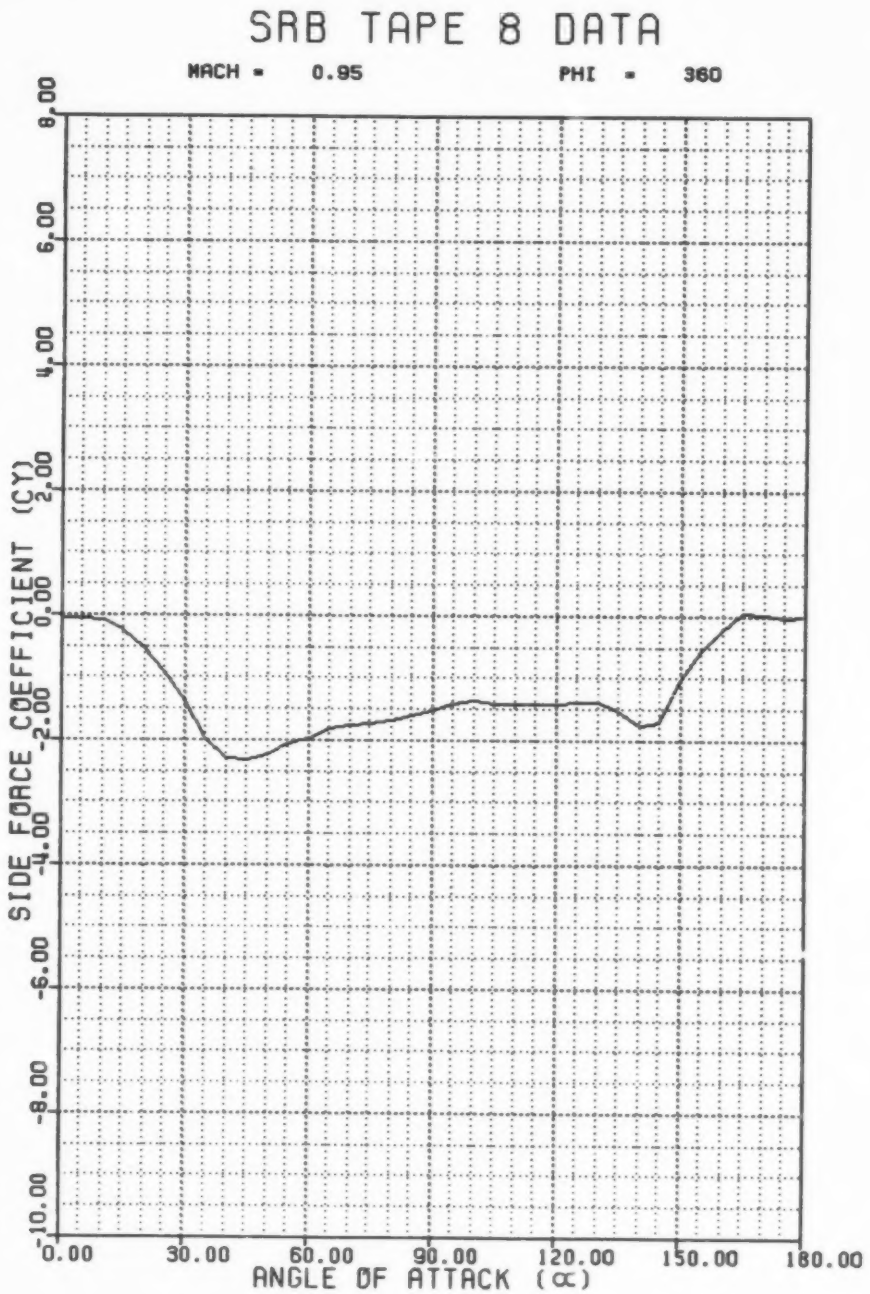
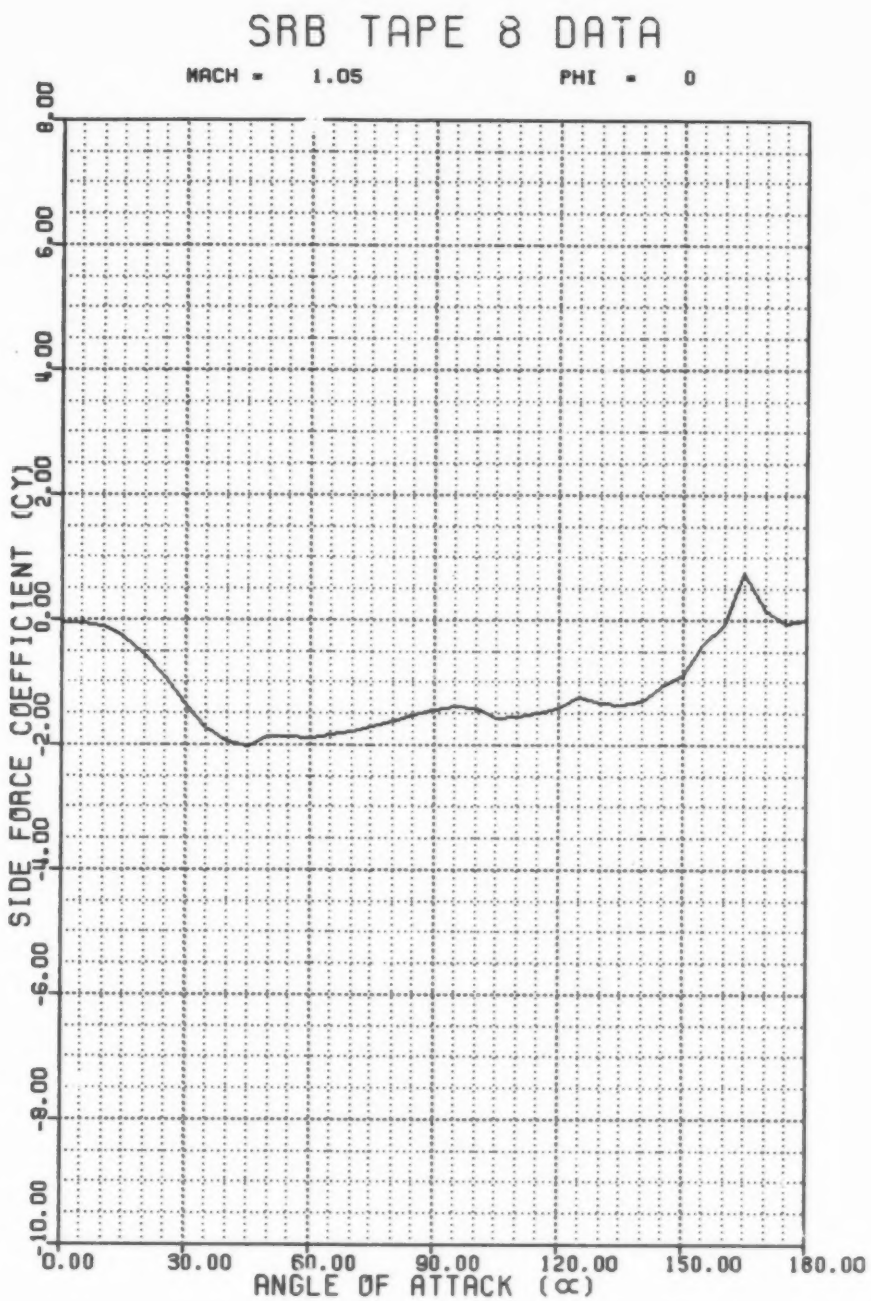
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.95 PHI = 315




SRB TAPE 8 DATA
MACH = 0.95
PHI = 360
SIDE FORCE COEFFICIENT (CY)
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 0
SIDE FORCE COEFFICIENT (CY)
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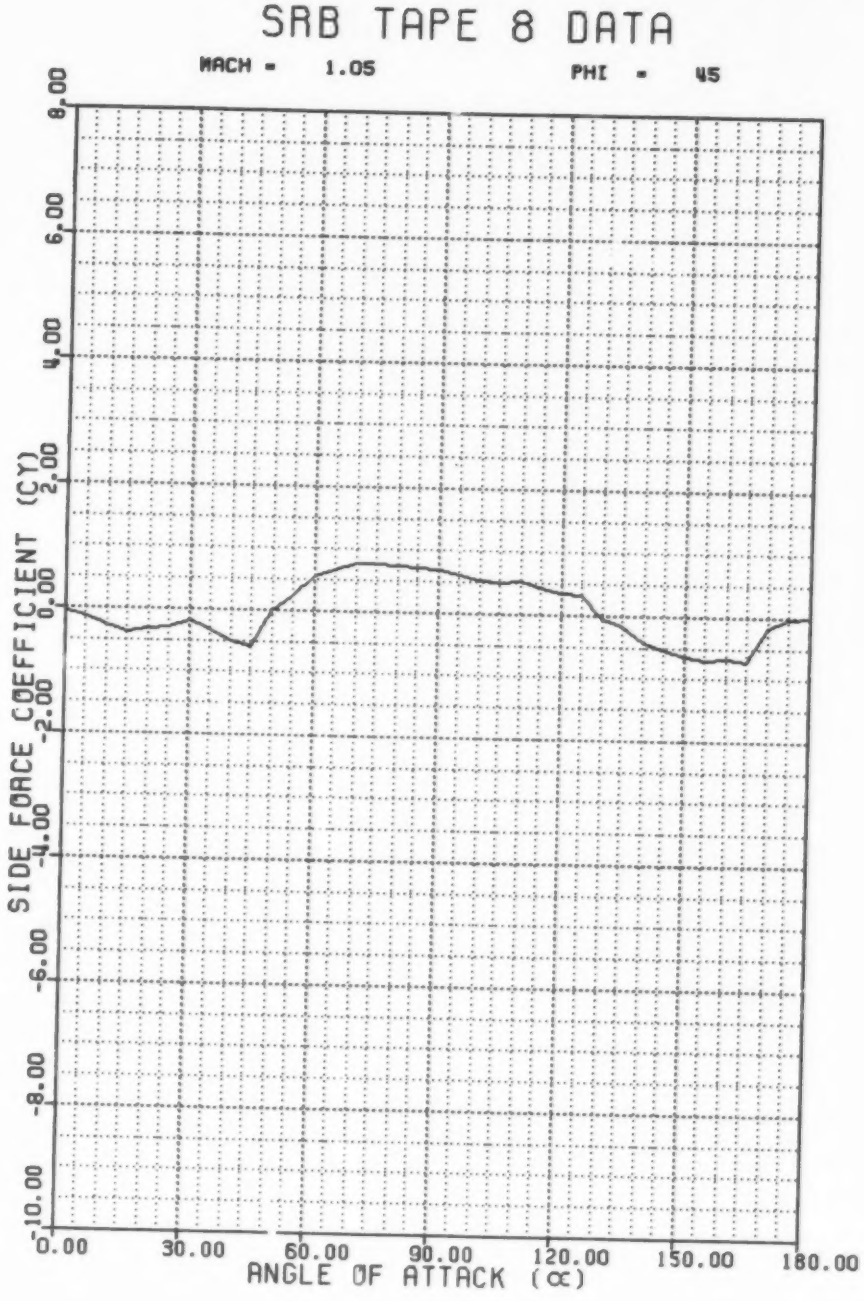
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 45
SIDE FORCE COEFFICIENT (CY)
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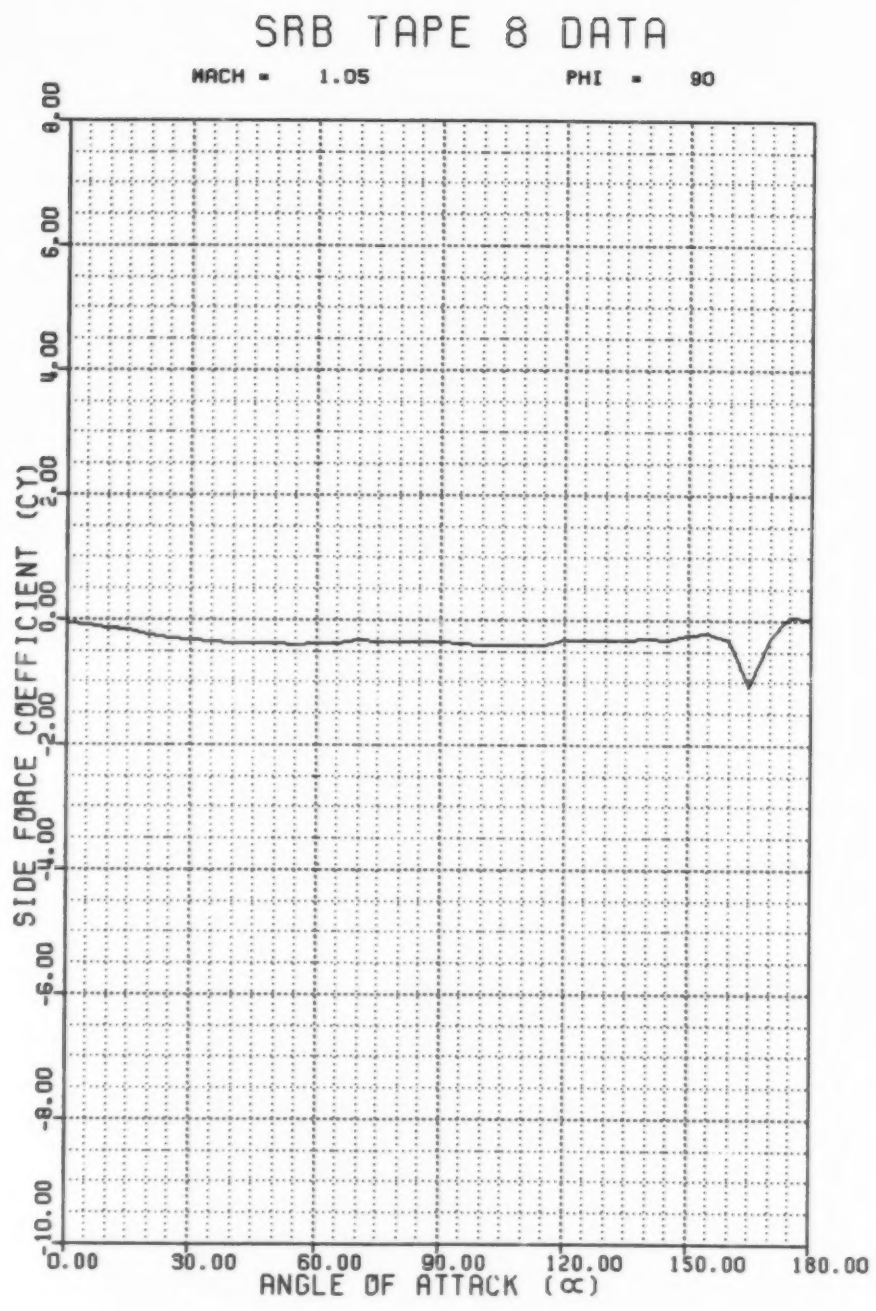
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 90
SIDE FORCE COEFFICIENT (CY)
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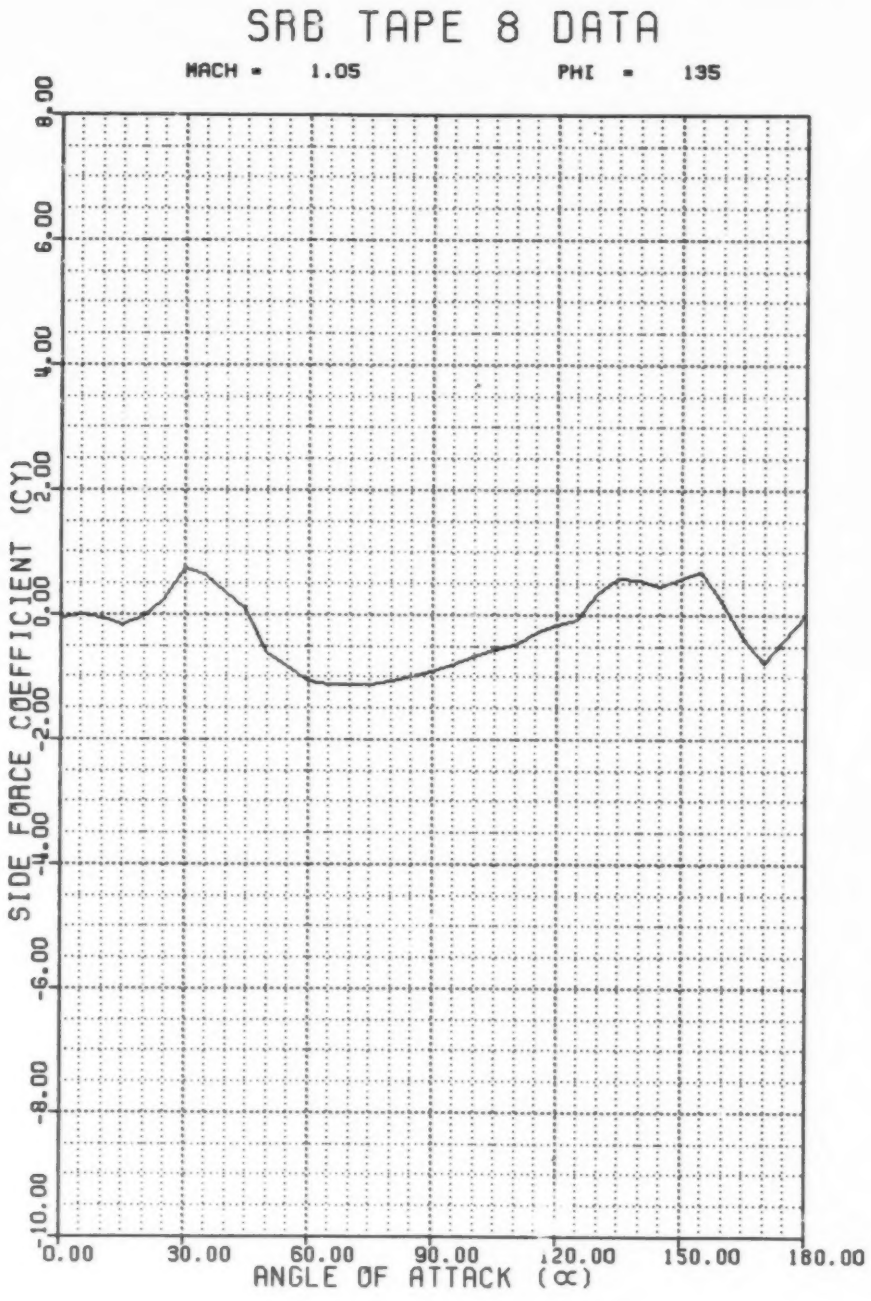
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 135
SIDE FORCE COEFFICIENT (CY)
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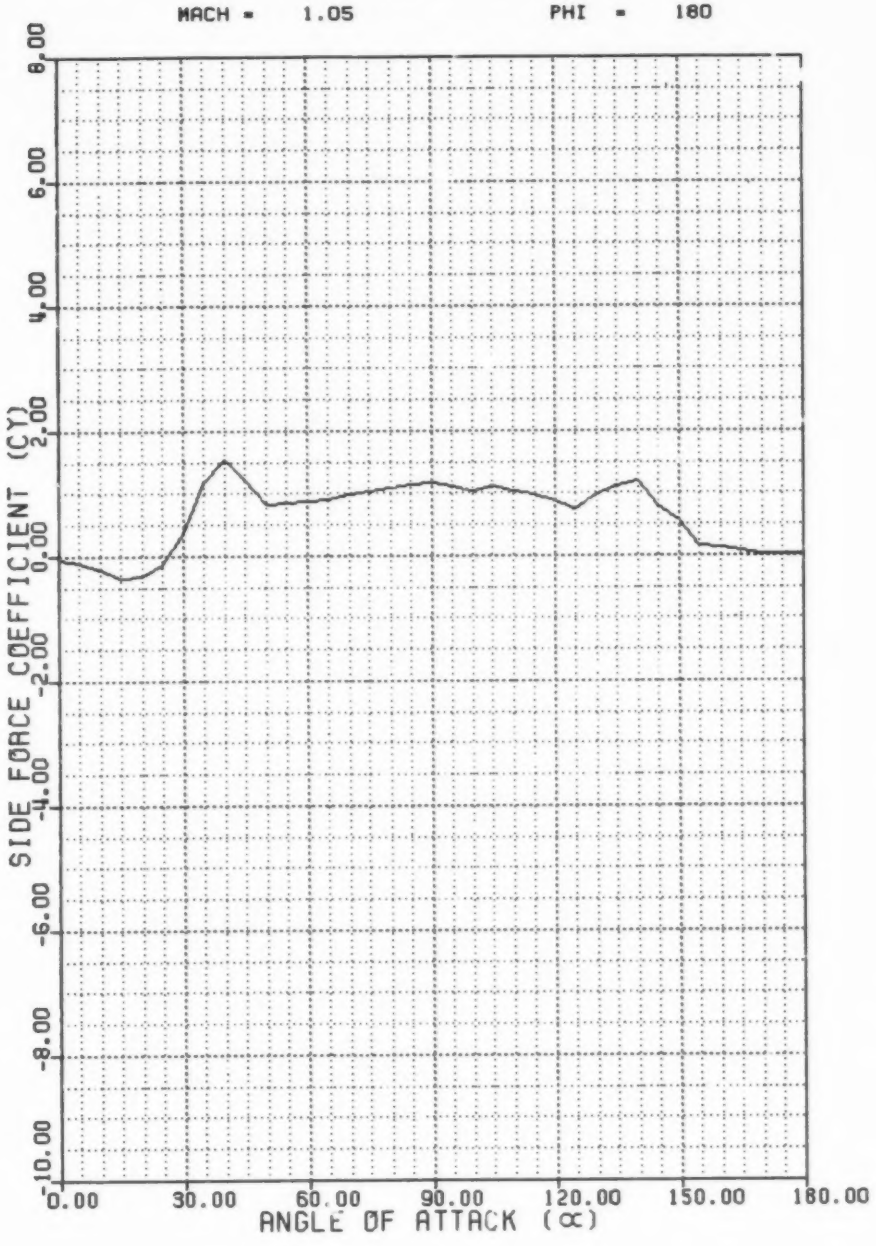
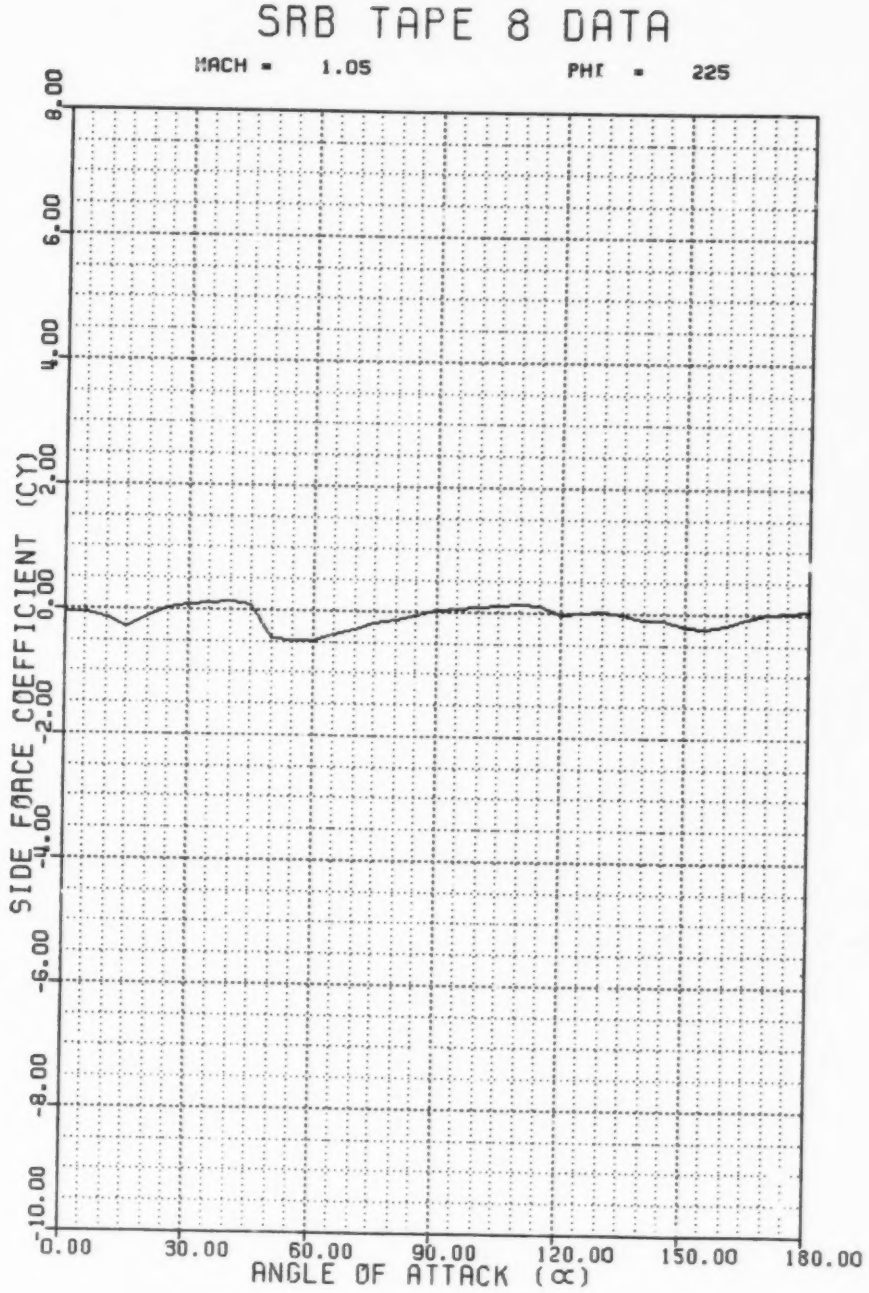
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.05 PHI = 180




SRB TAPE 8 DATA
MACH = 1.05
PHI = 225
SIDE FORCE COEFFICIENT (CY)
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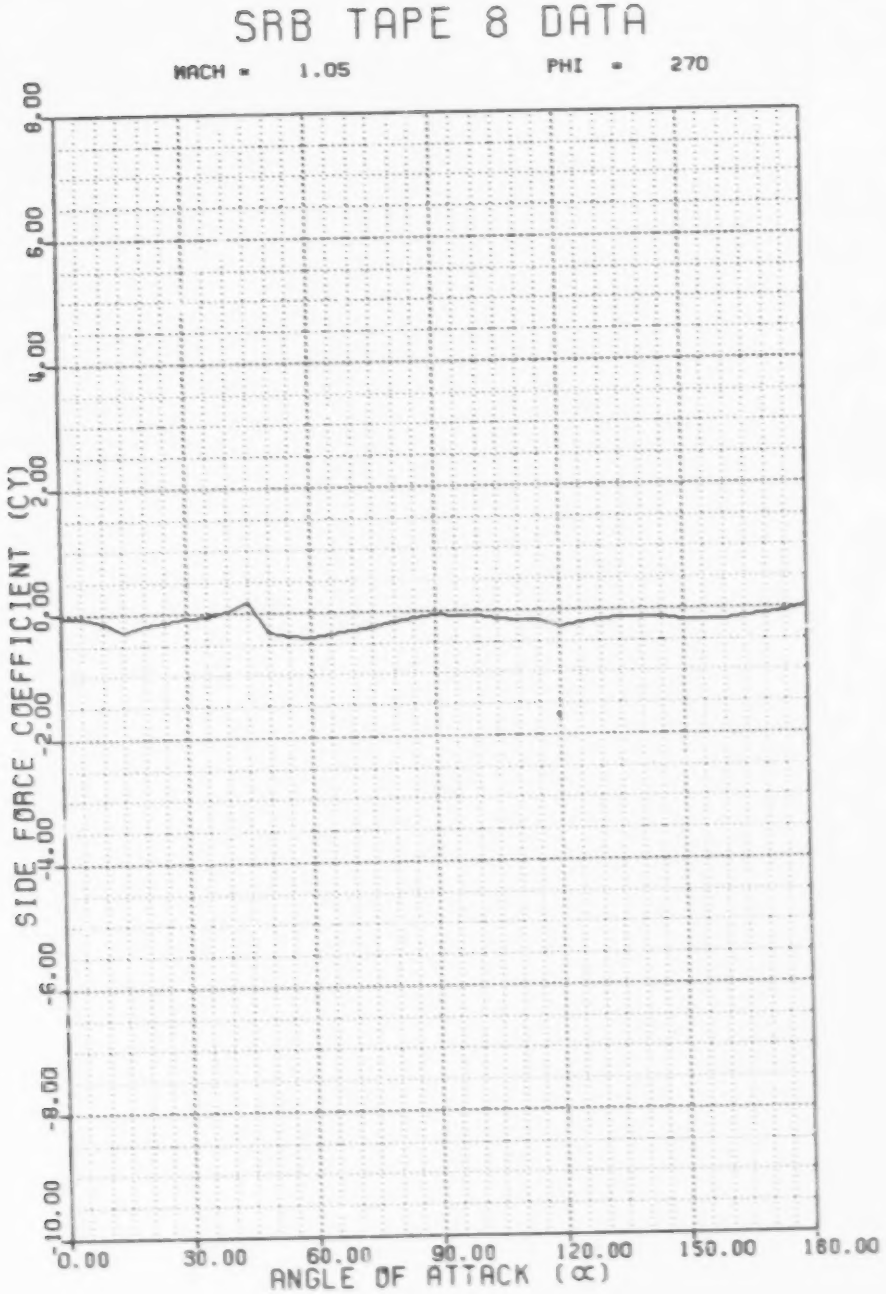
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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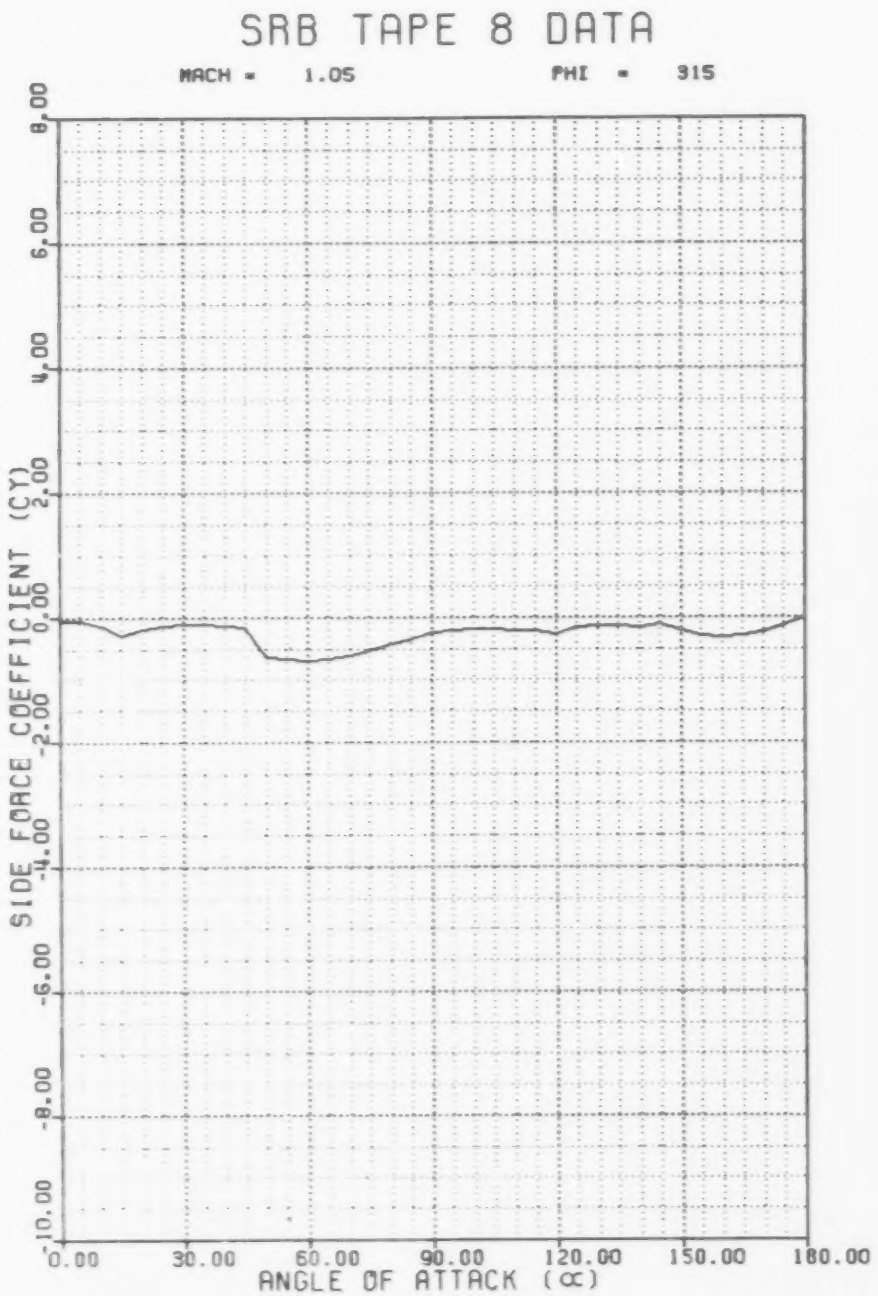
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 315
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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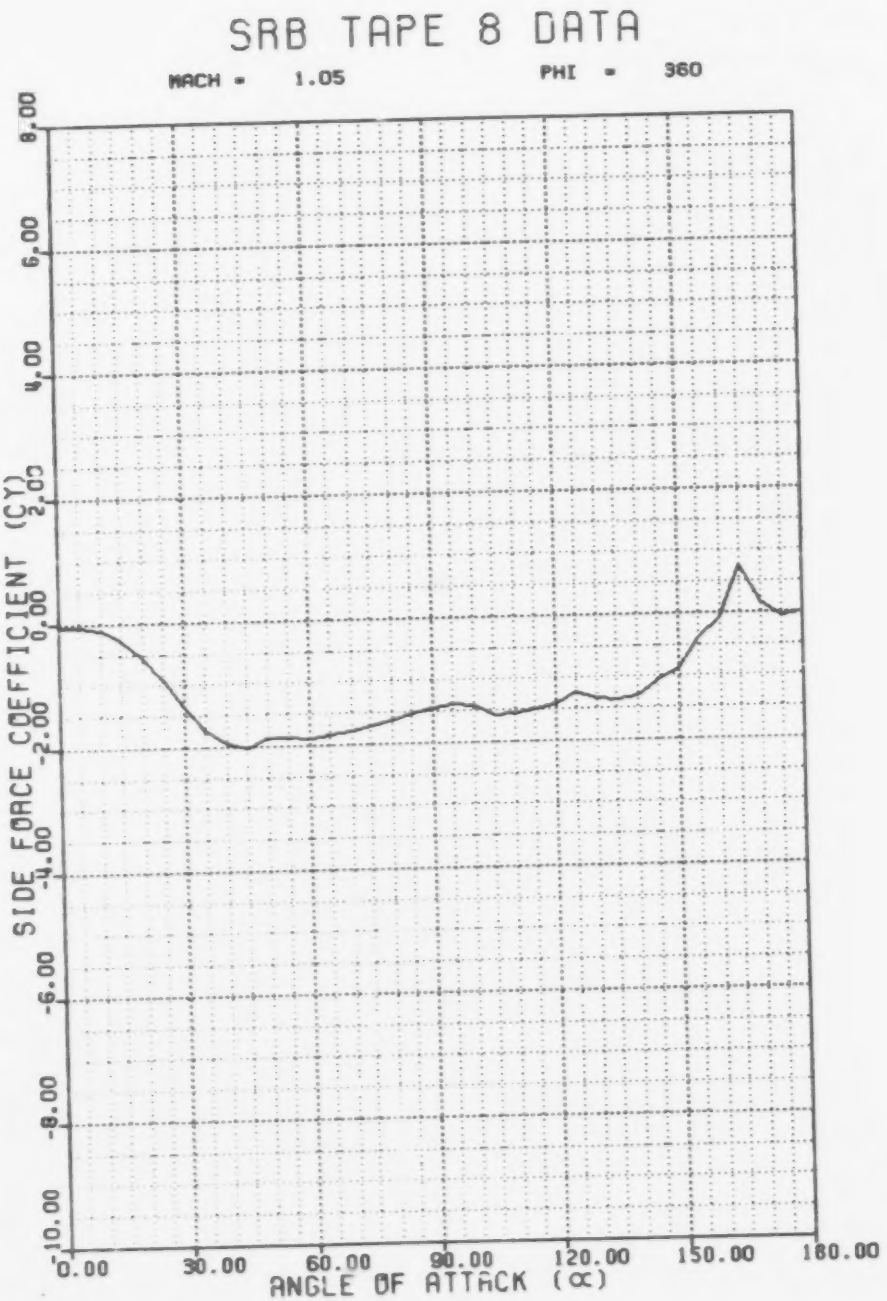
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 360
SIDE FORCE COEFFICIENT (CY)
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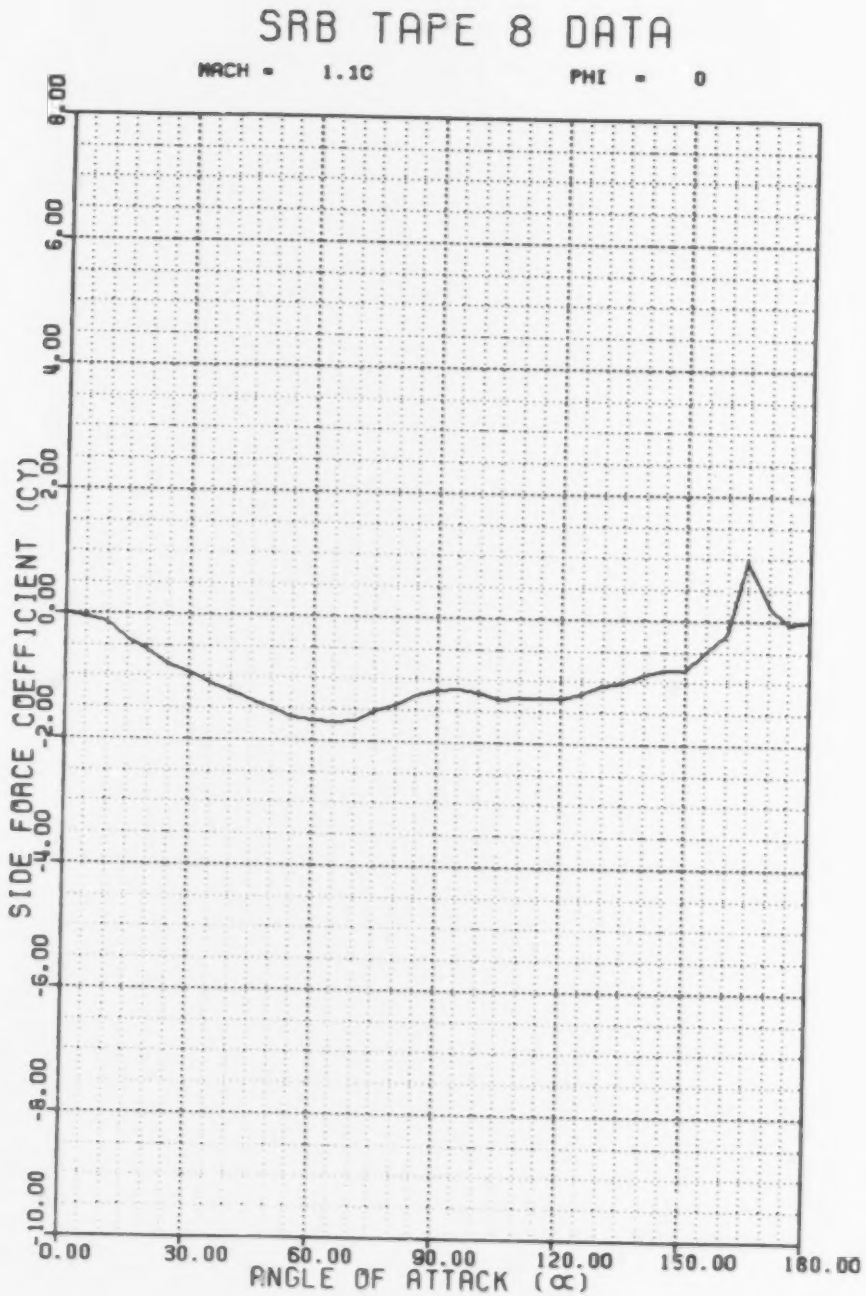
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 0
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4.00
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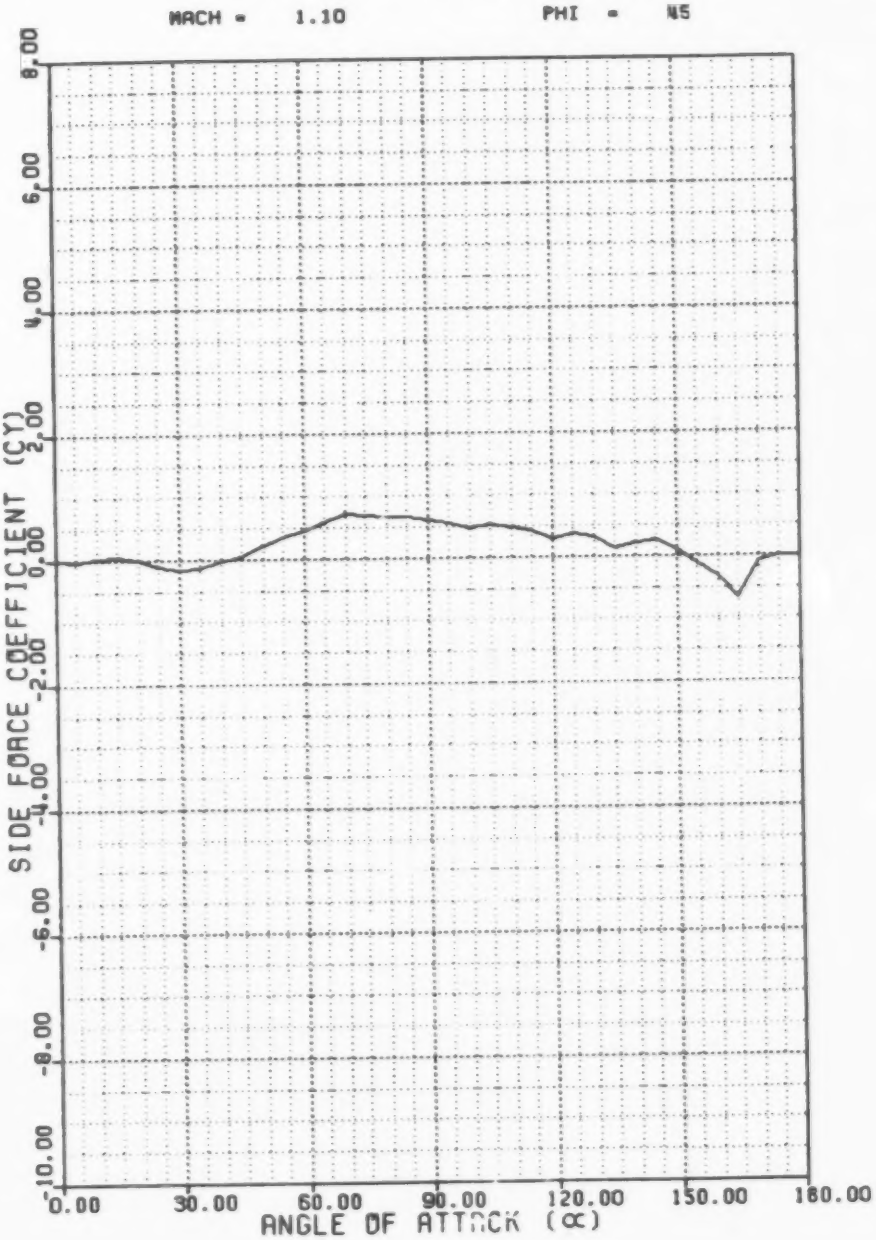
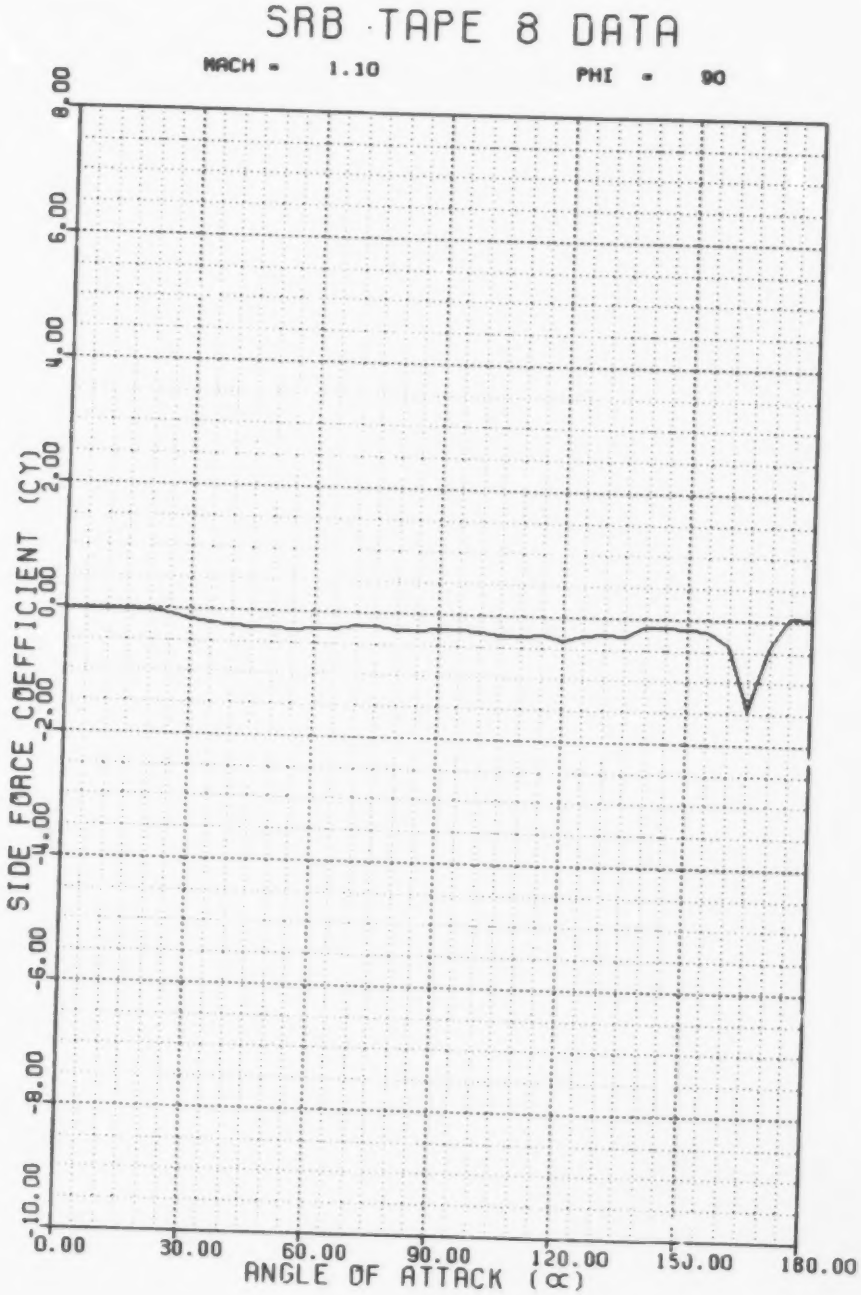
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.10 PHI = 45




SRB TAPE 8 DATA
MACH = 1.10
PHI = 90
SIDE FORCE COEFFICIENT (CY)
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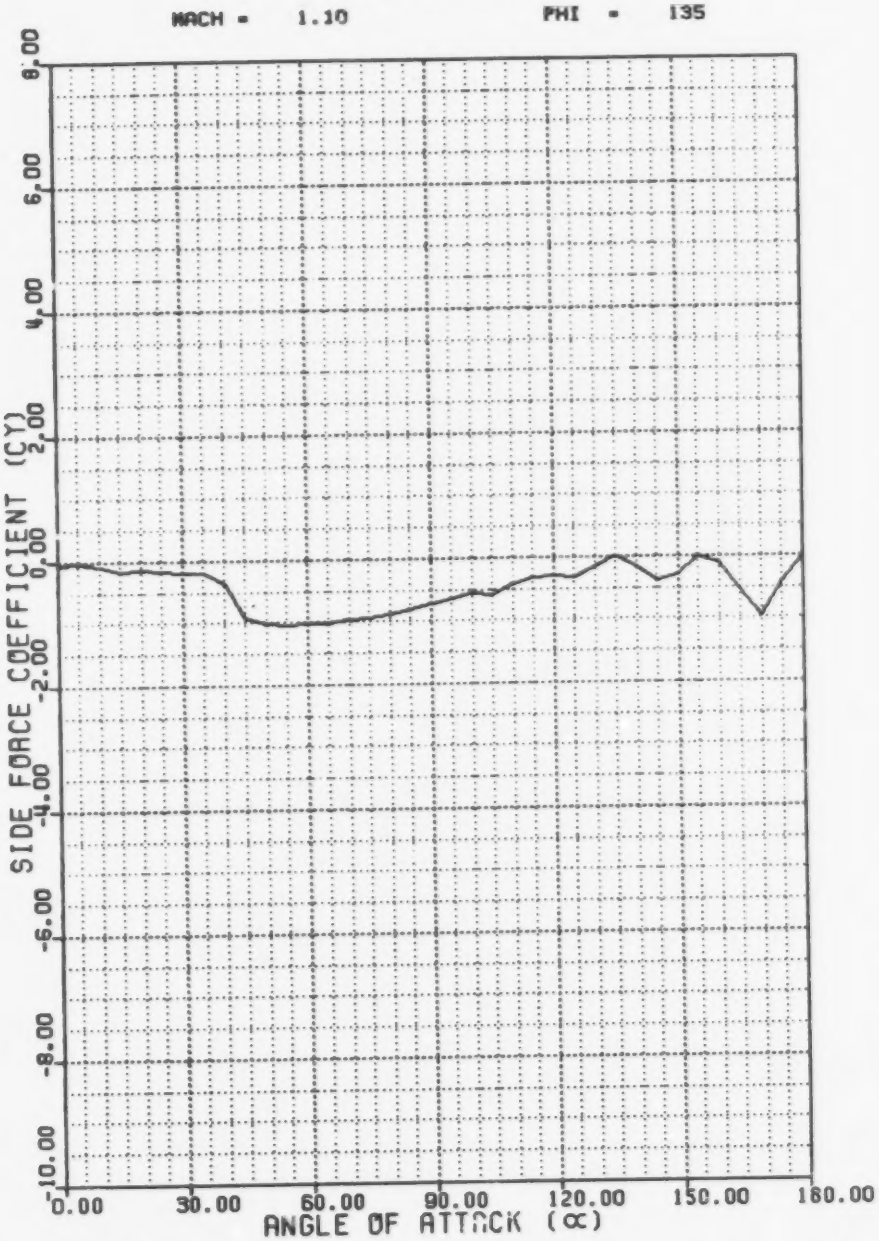
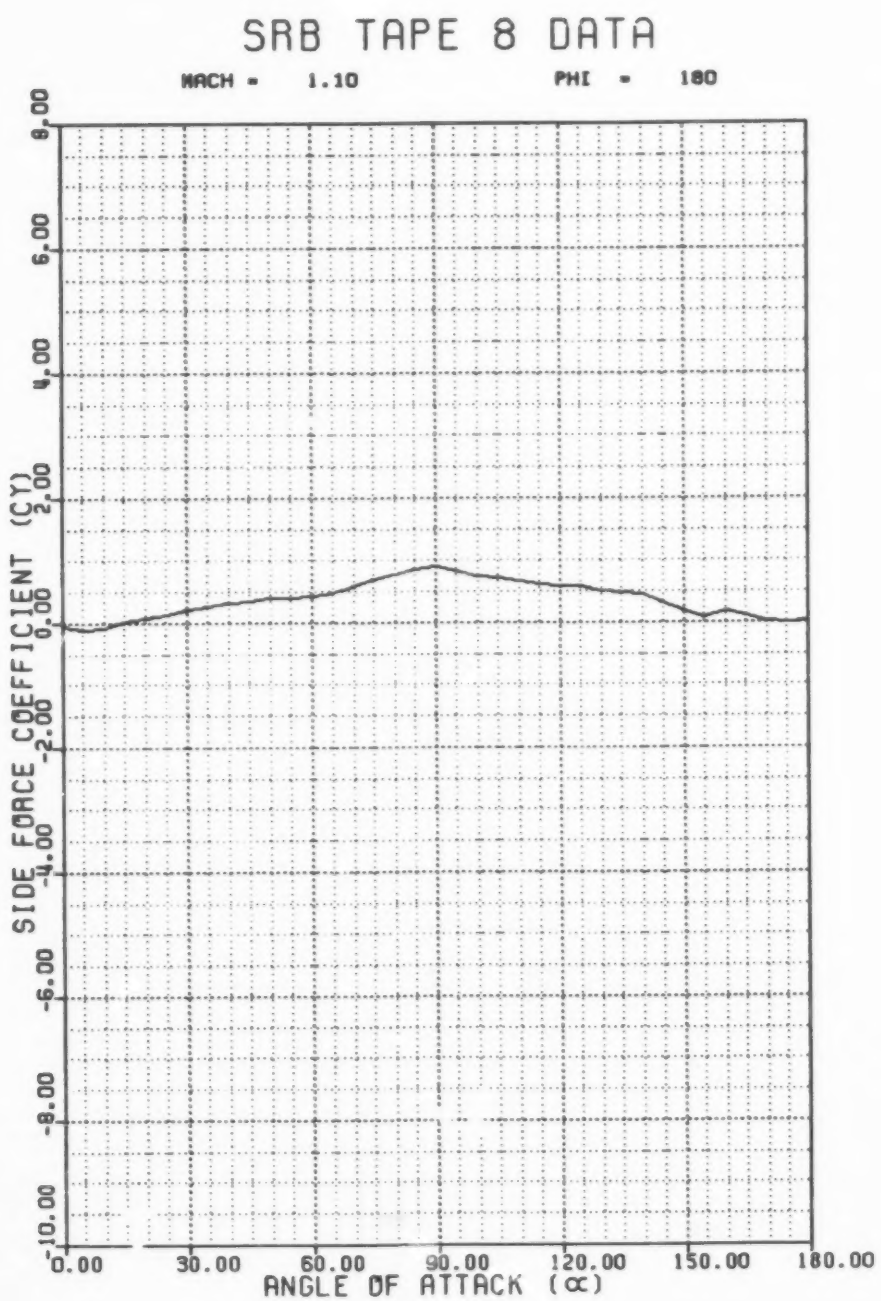
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.10 PHI = 135

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-2.00
-4.00
-6.00
-8.00
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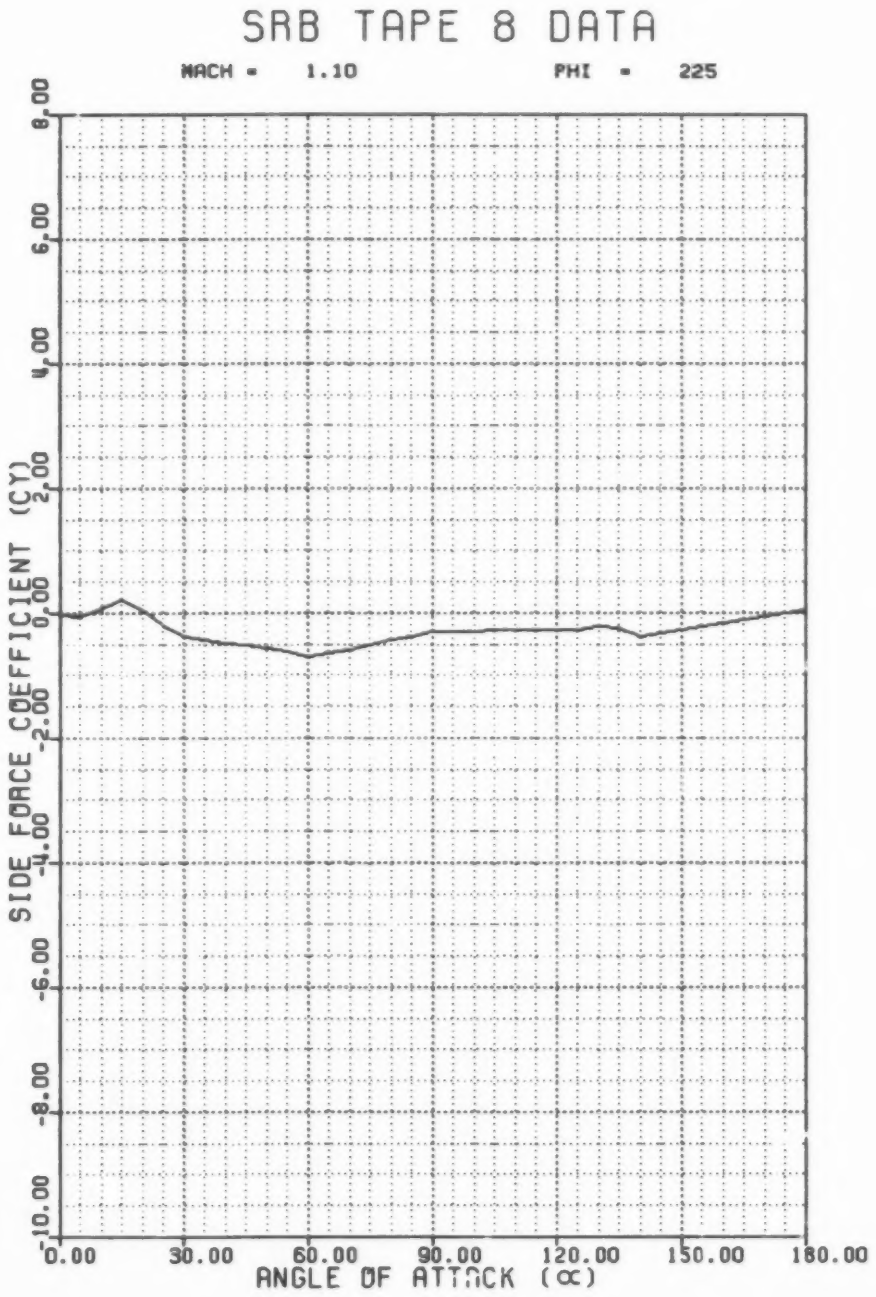
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 225
SIDE FORCE COEFFICIENT (CY)
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0.00
-2.00
-4.00
-6.00
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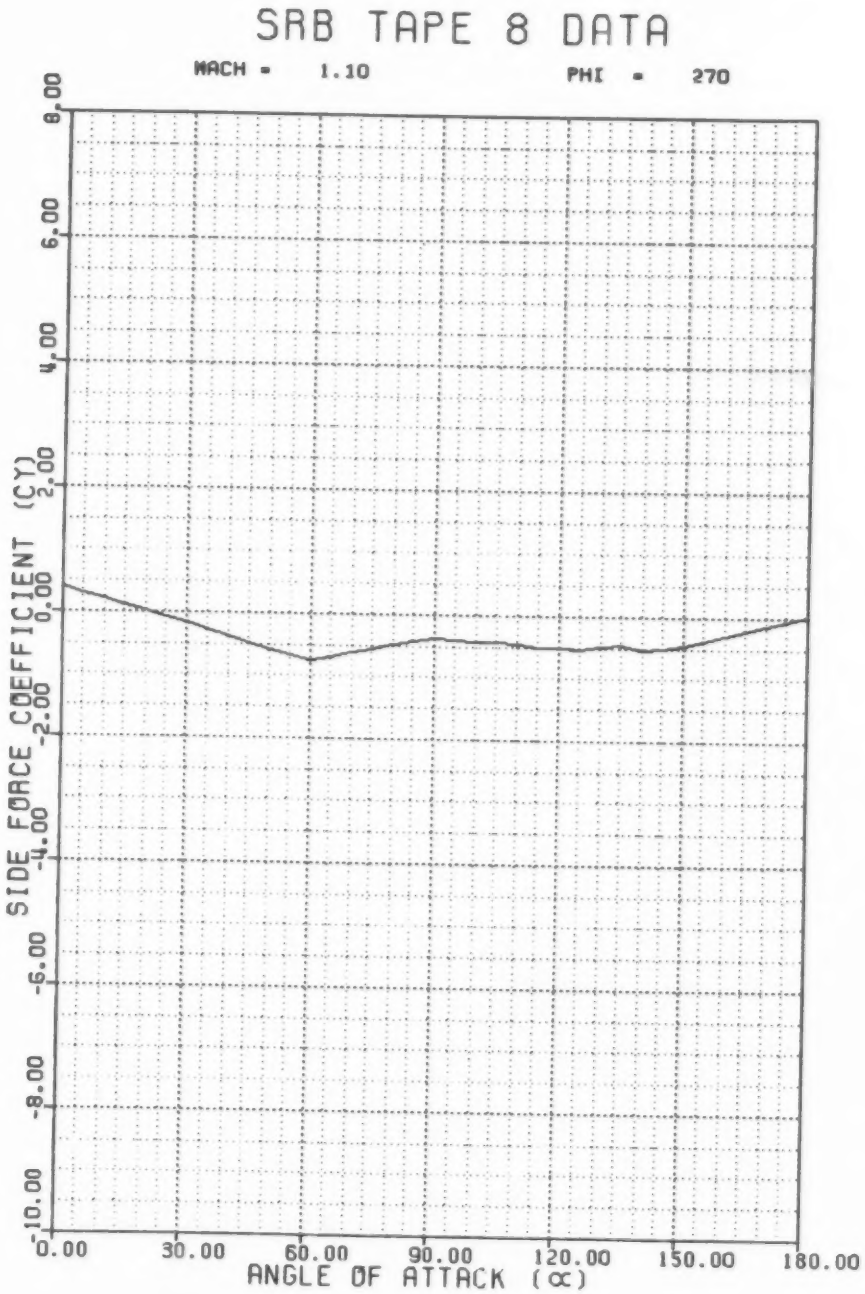
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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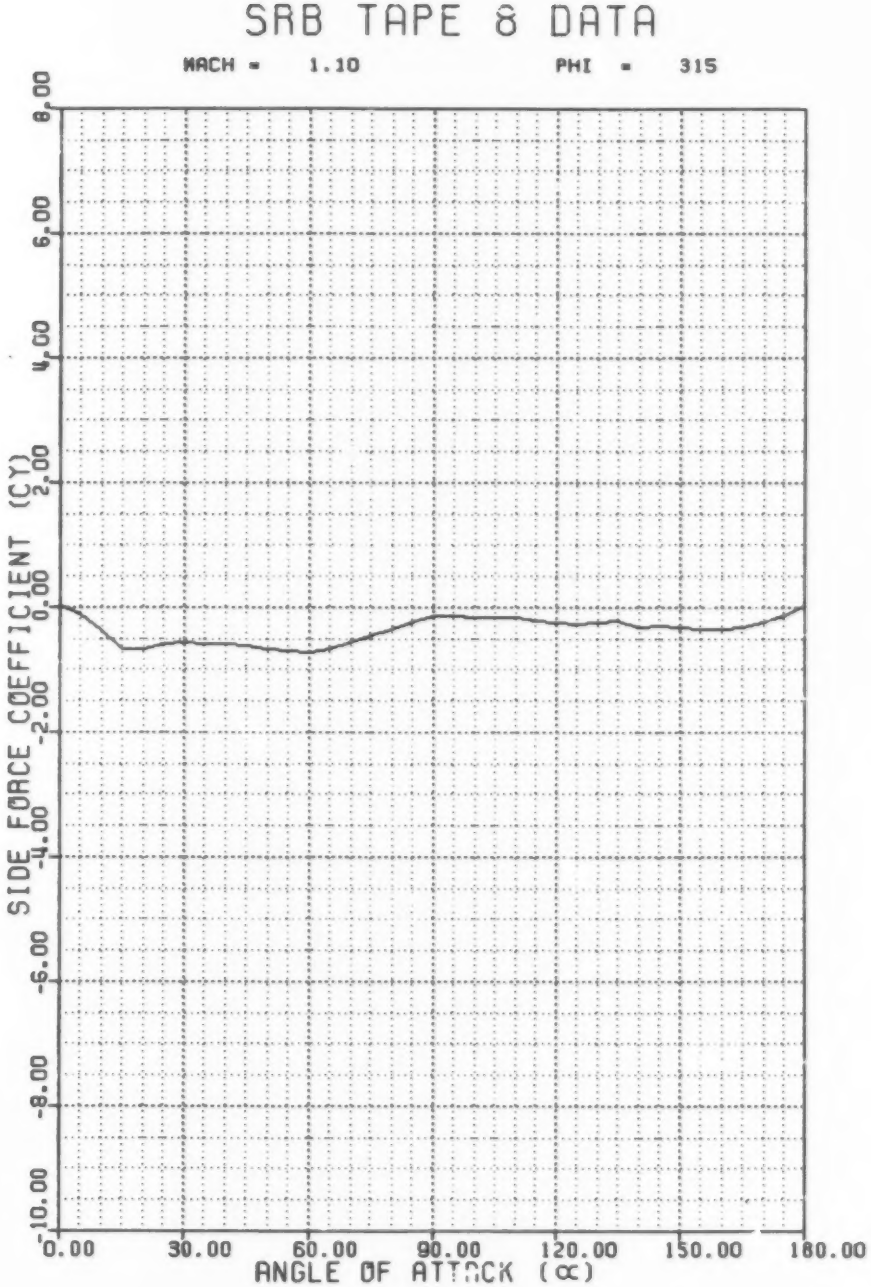
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
MACH = 1.10
PHI = 315
SIDE FORCE COEFFICIENT (CY)
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-2.00
-4.00
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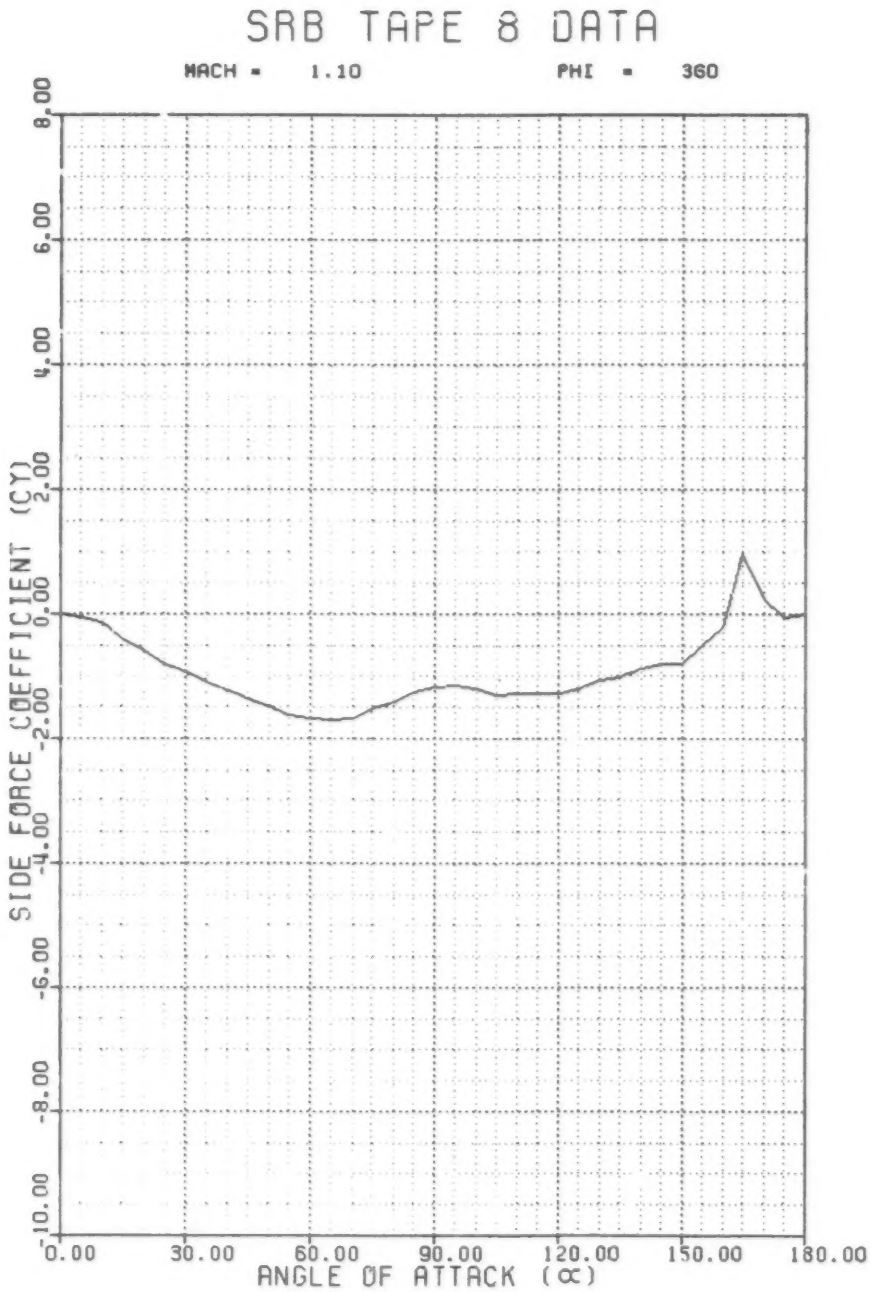
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 360
SIDE FORCE COEFFICIENT (CY)
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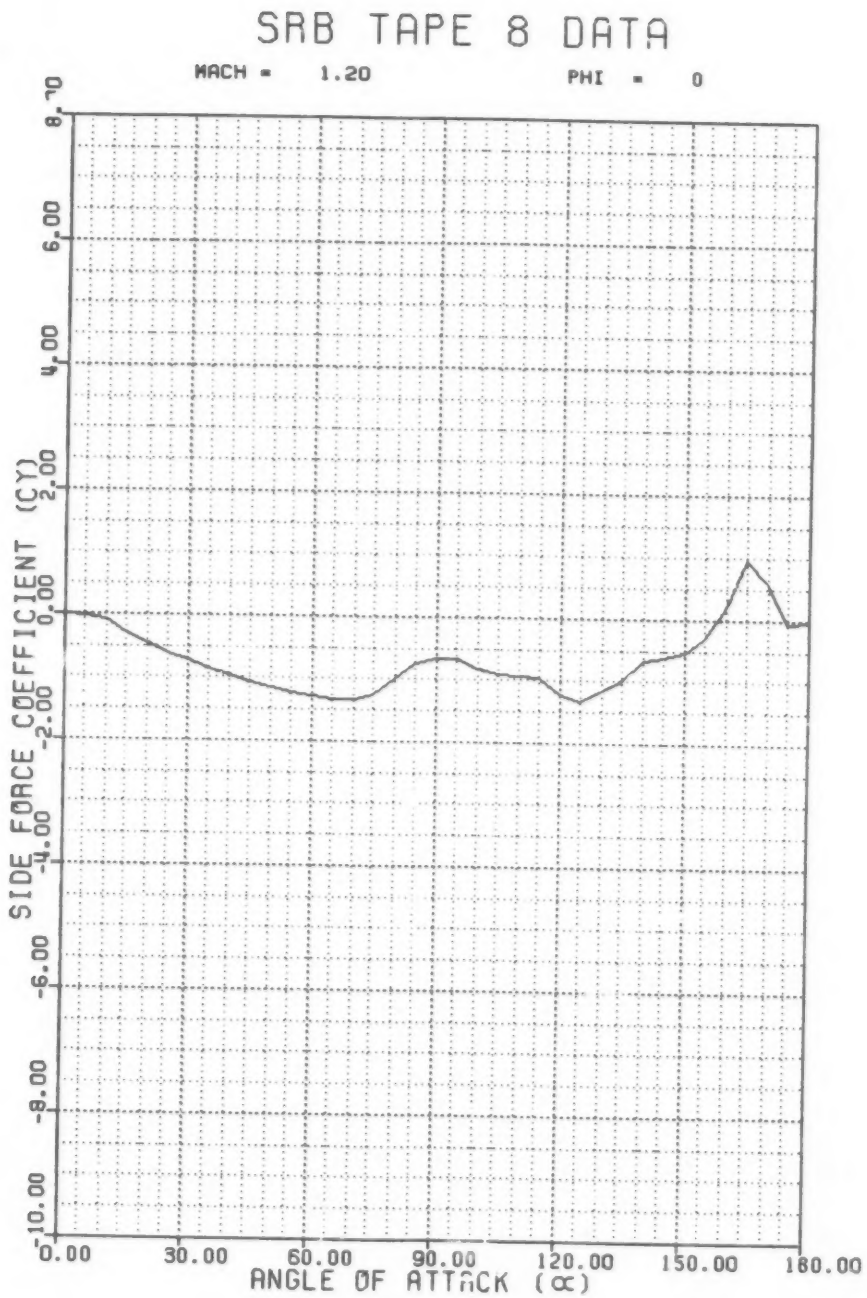
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 0
SIDE FORCE COEFFICIENT (CY)
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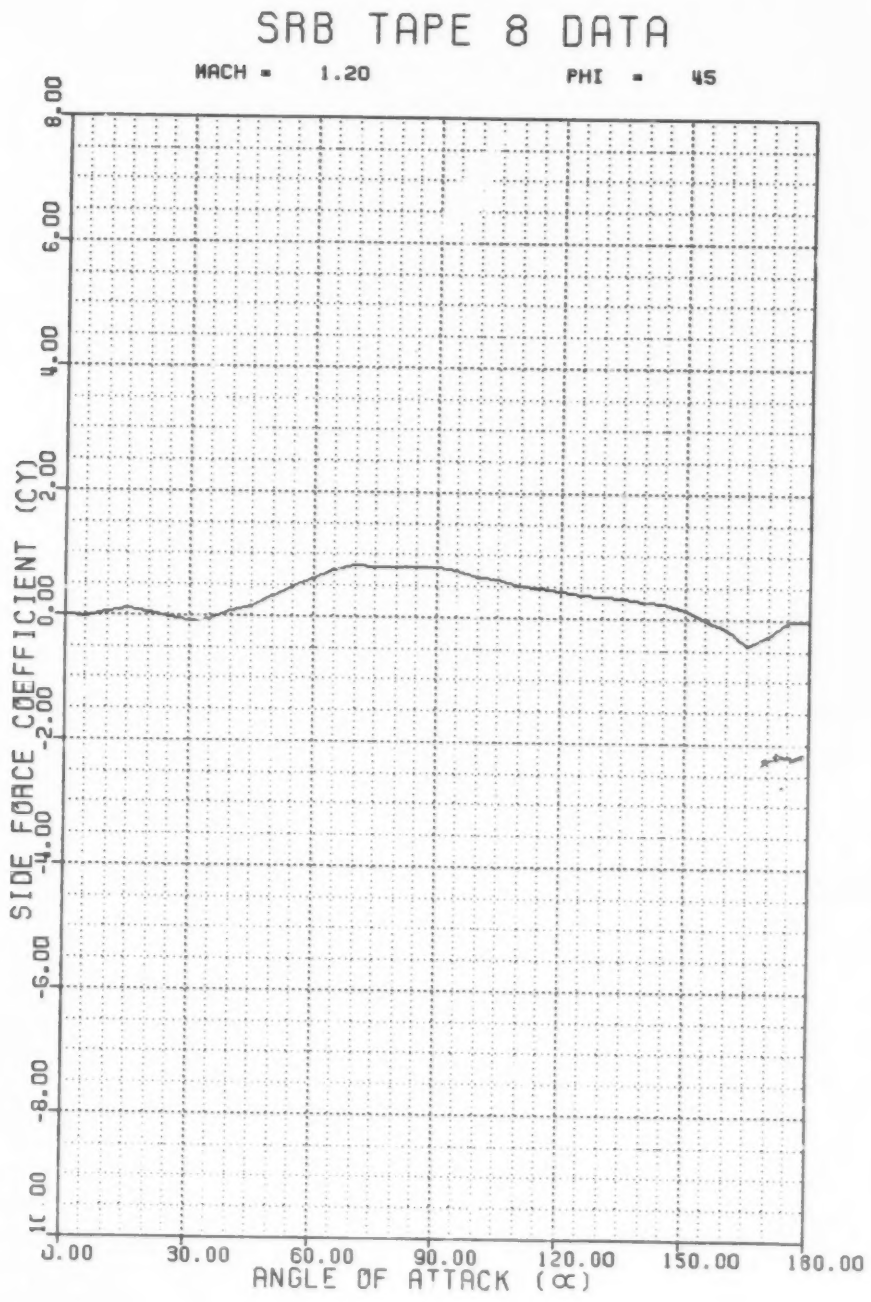
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 45
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
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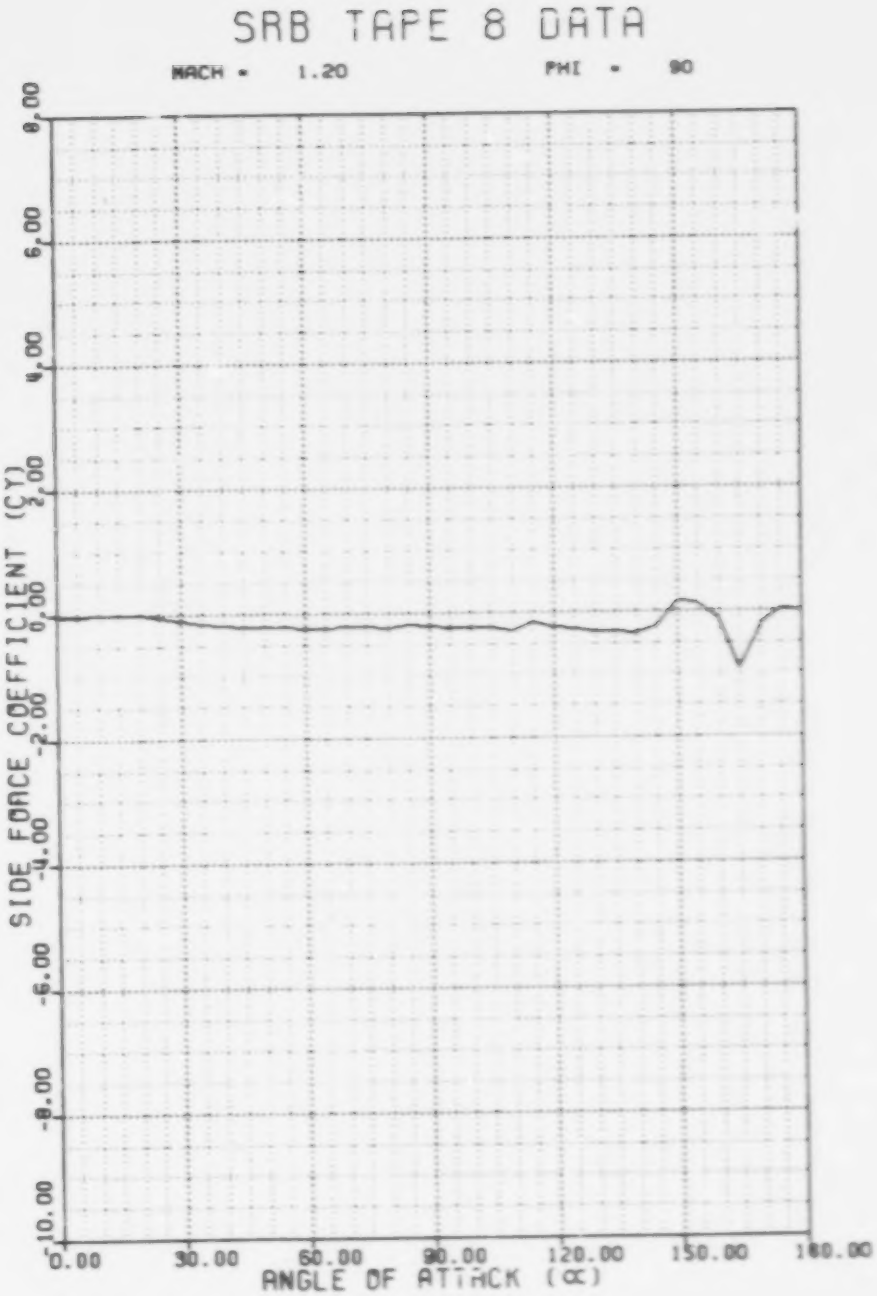
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH • 1.20
PHI • 90
SIDE FORCE COEFFICIENT (CY)
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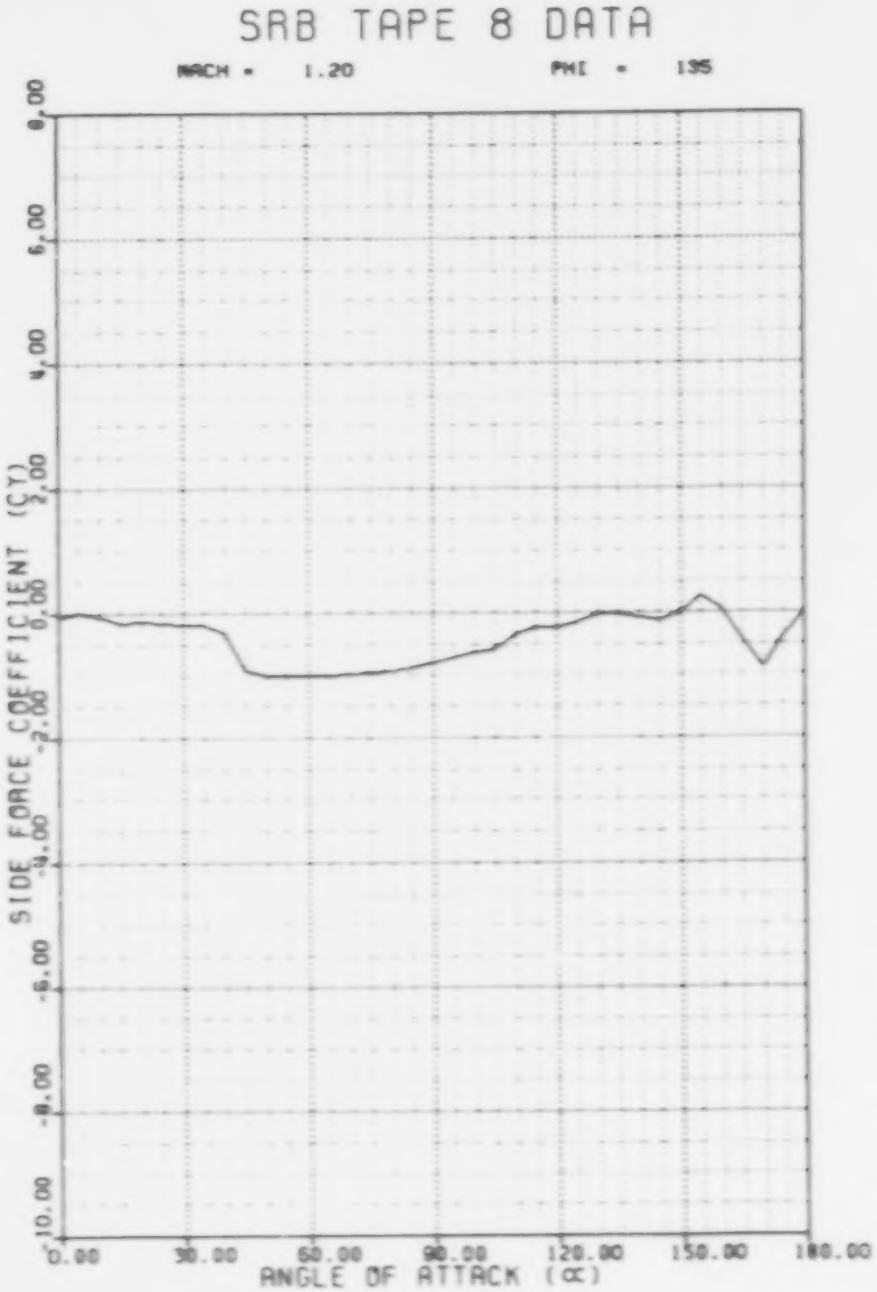
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

C-5


SRB TAPE 8 DATA
MACH = 1.20
PHI = 135
SIDE FORCE COEFFICIENT (CY)
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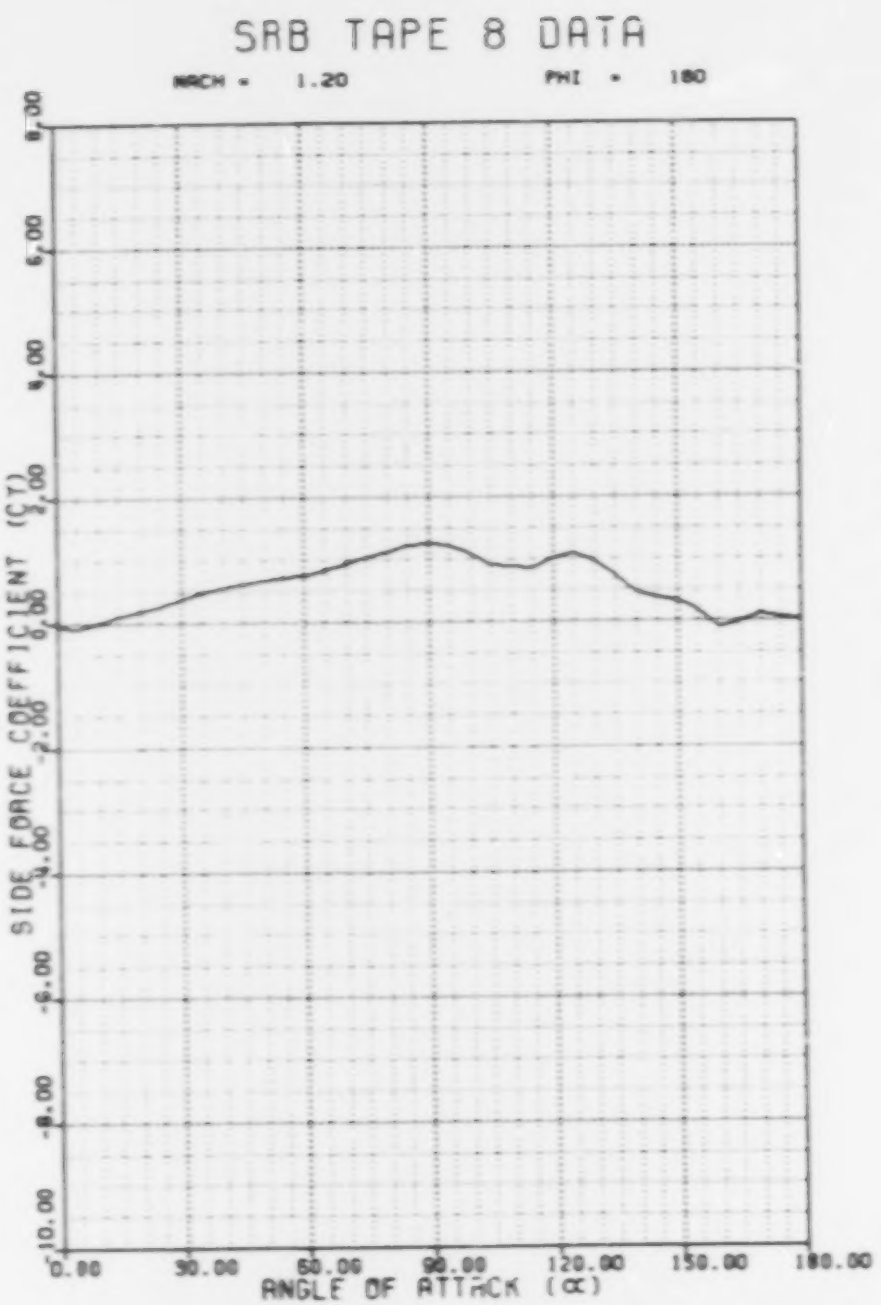
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 180
SIDE FORCE COEFFICIENT (CY)
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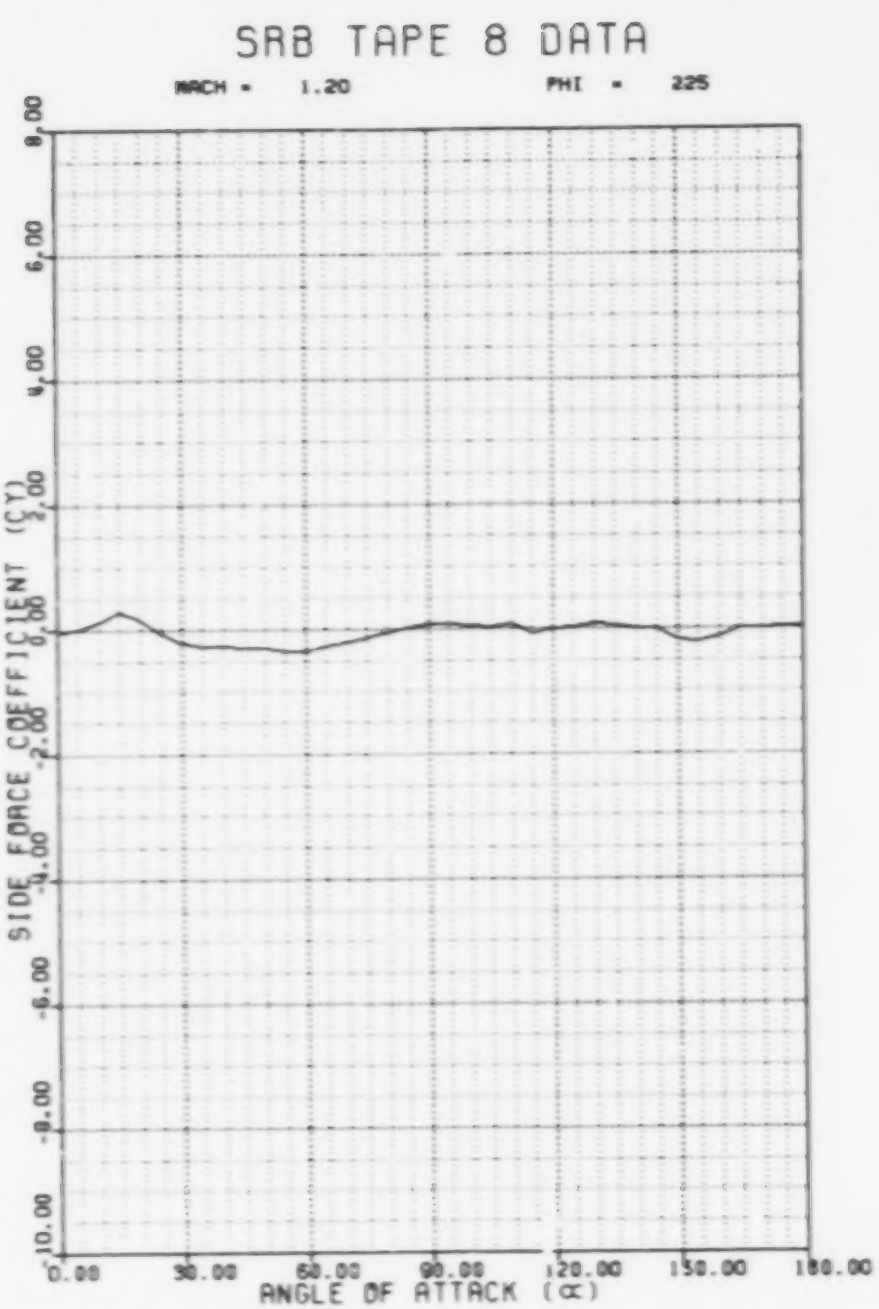
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 225
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4.00
2.00
0.00
-2.00
-4.00
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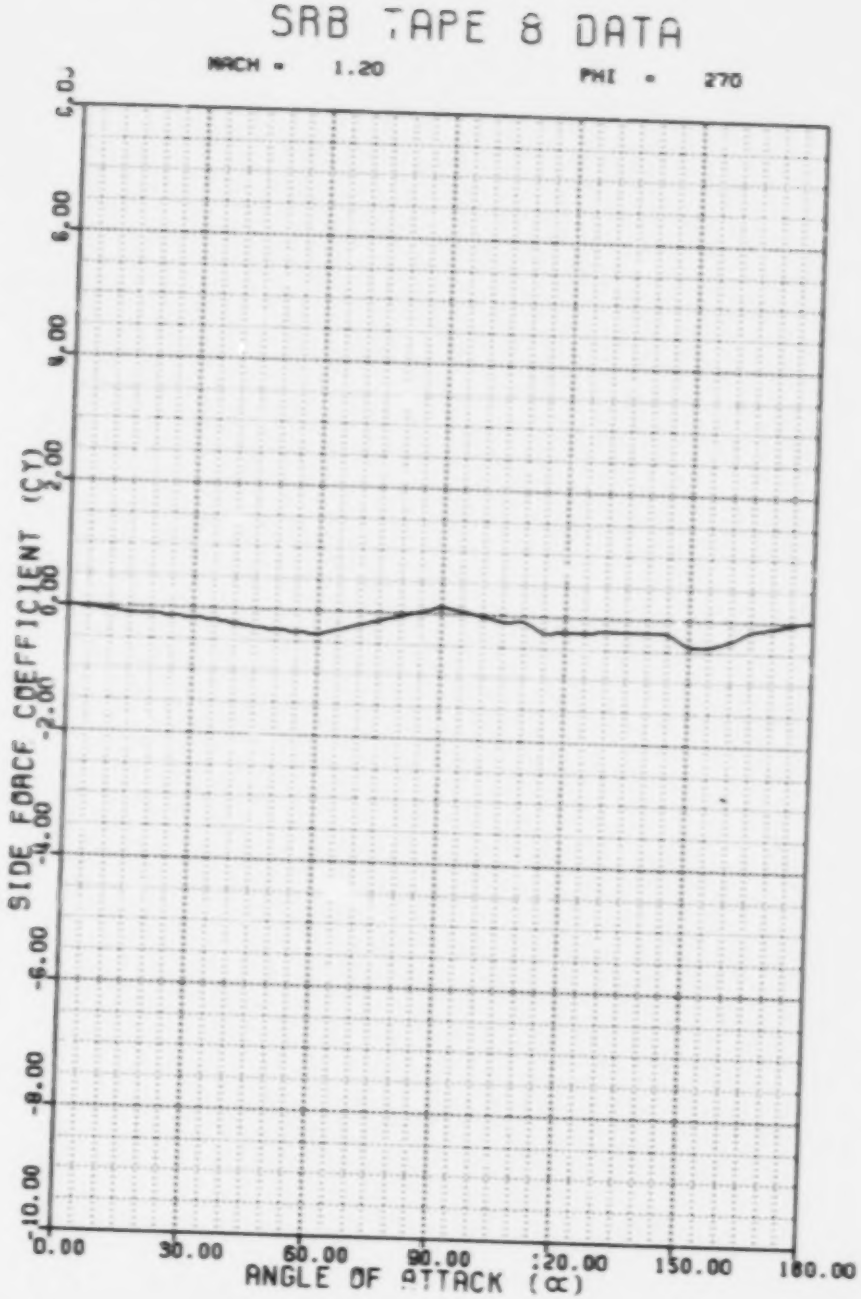
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
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SIDE FORCE COEFFICIENT (CY)
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2.00
0.00
-2.00
-4.00
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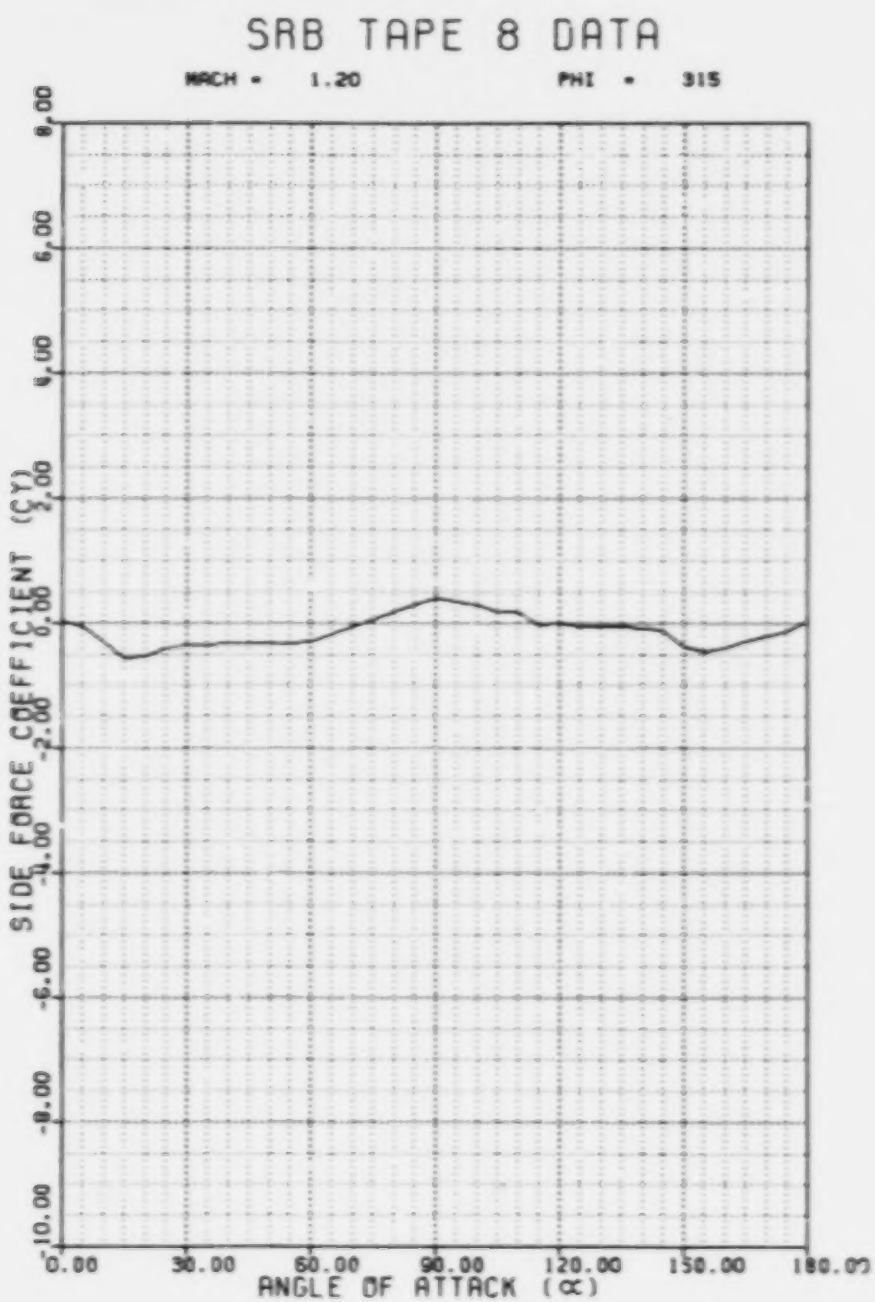
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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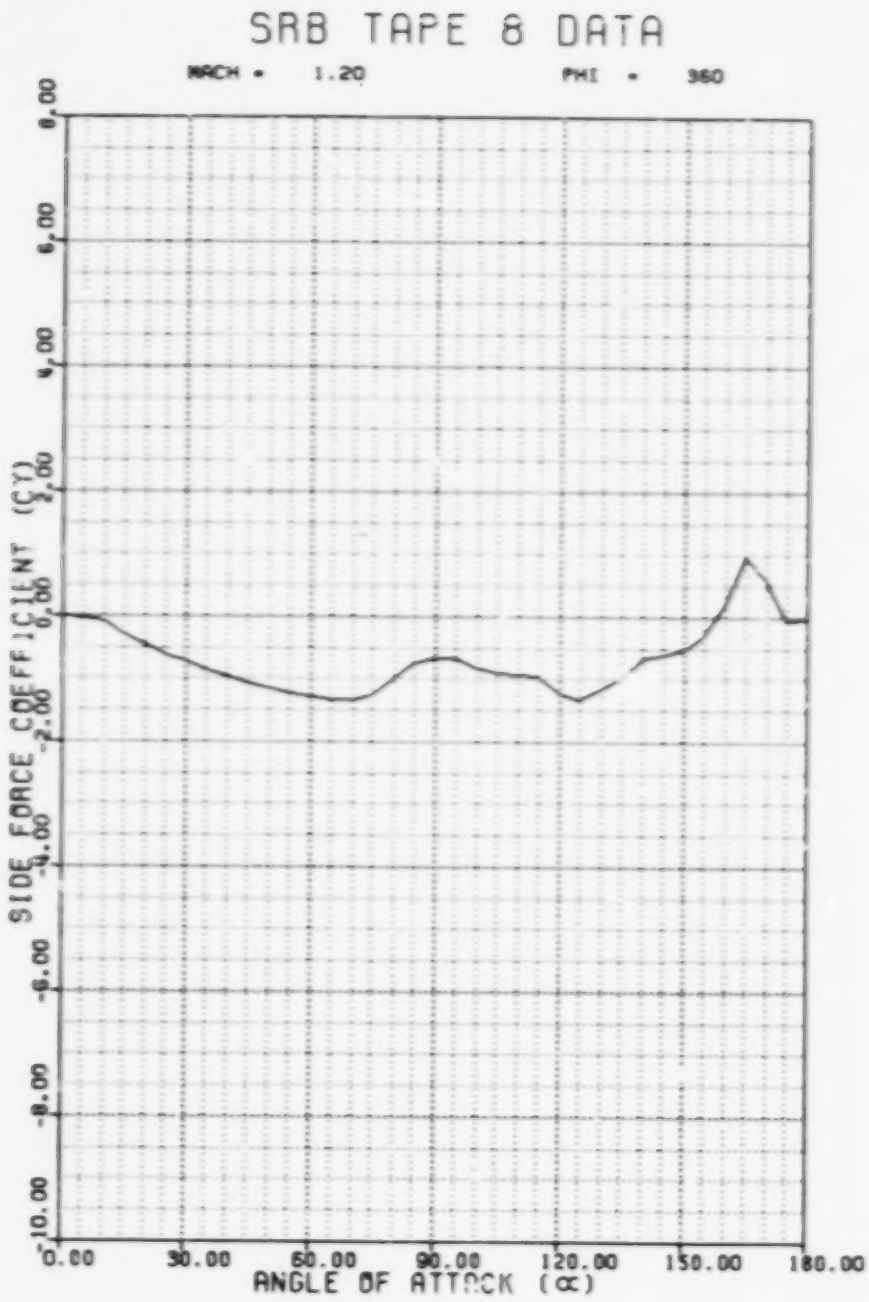
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
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4.00
2.00
0.00
-2.00
-4.00
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0.00
30.00
60.00
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120.00
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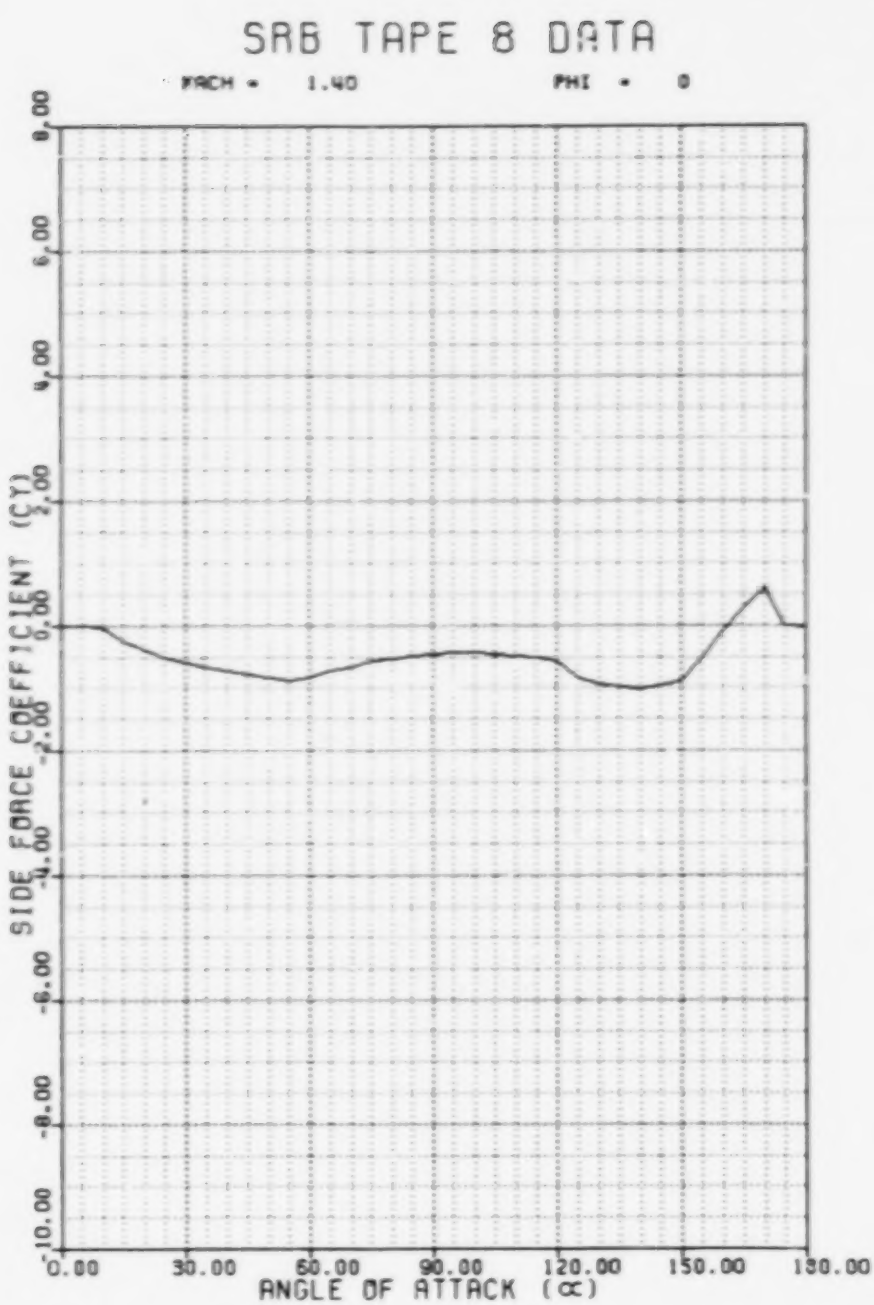
180.00
ANGLE OF ATTACK (α)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4.00
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0.00
-2.00
-4.00
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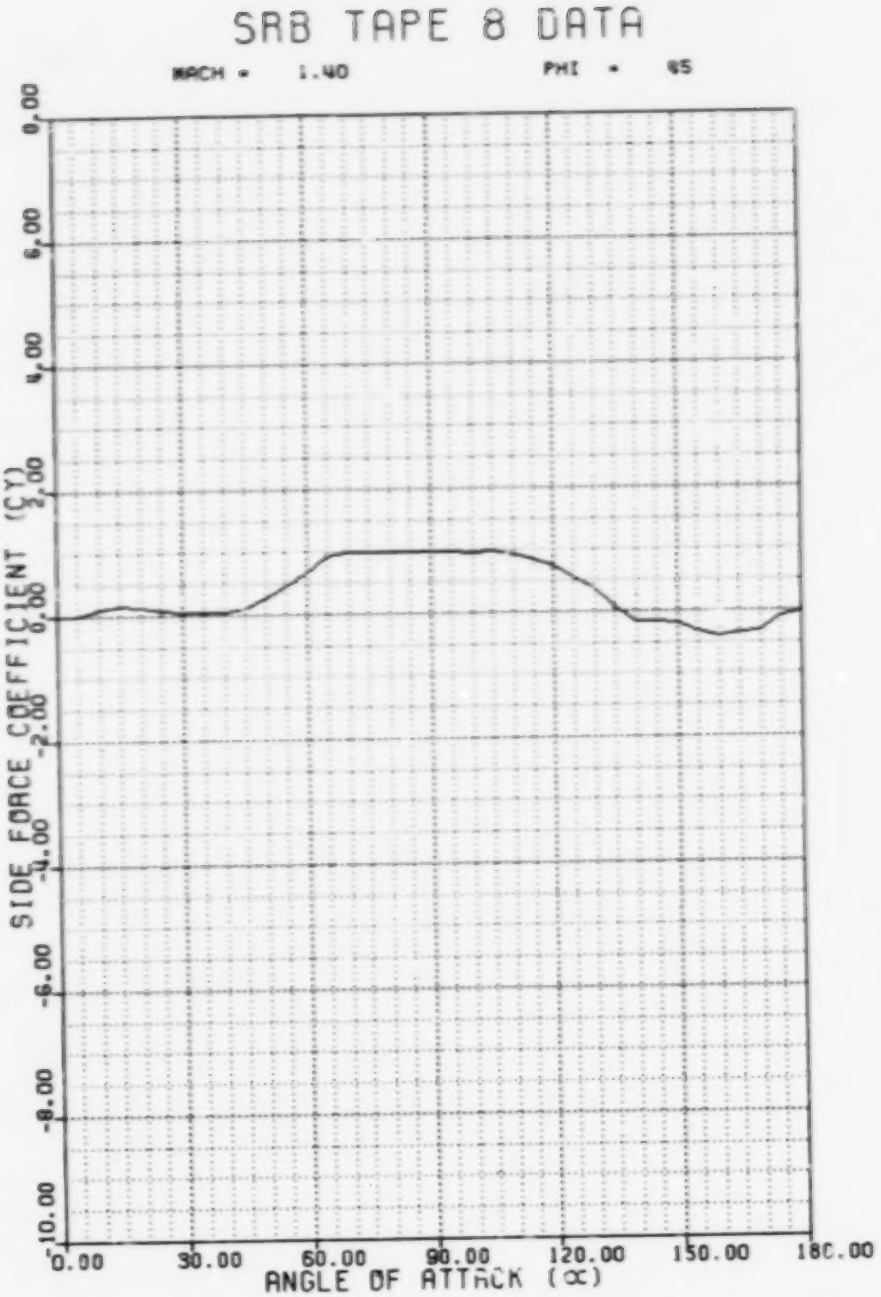
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-4.00
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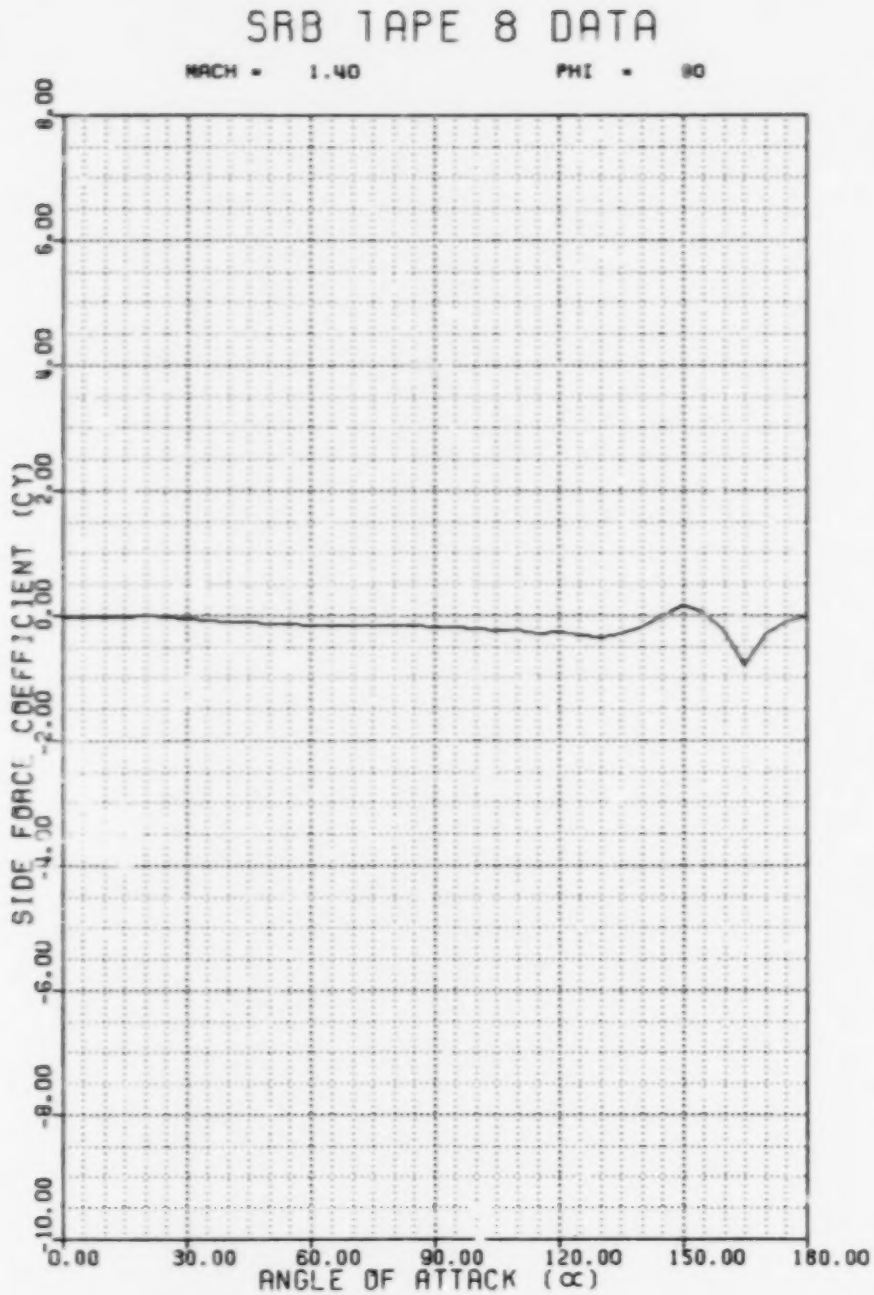
120.00
150.00
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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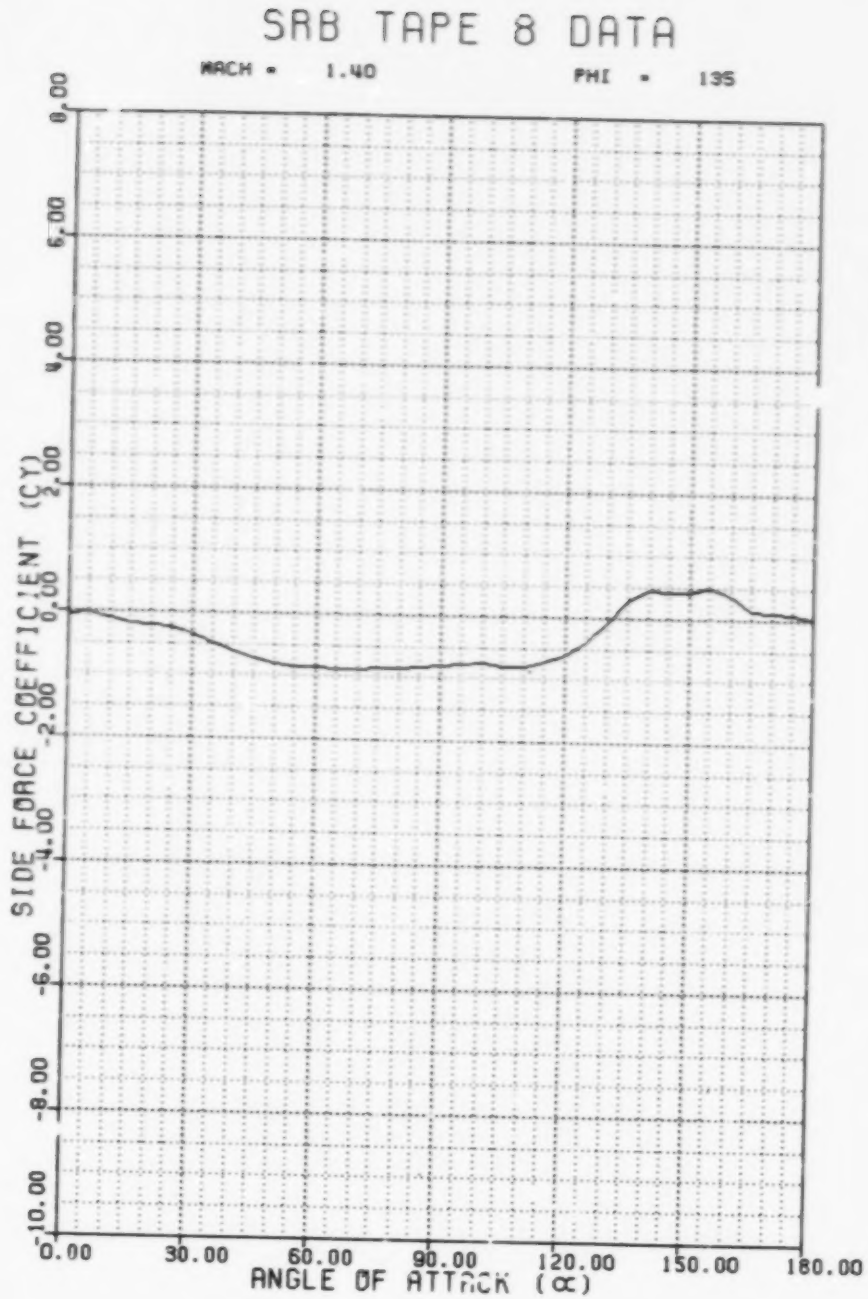
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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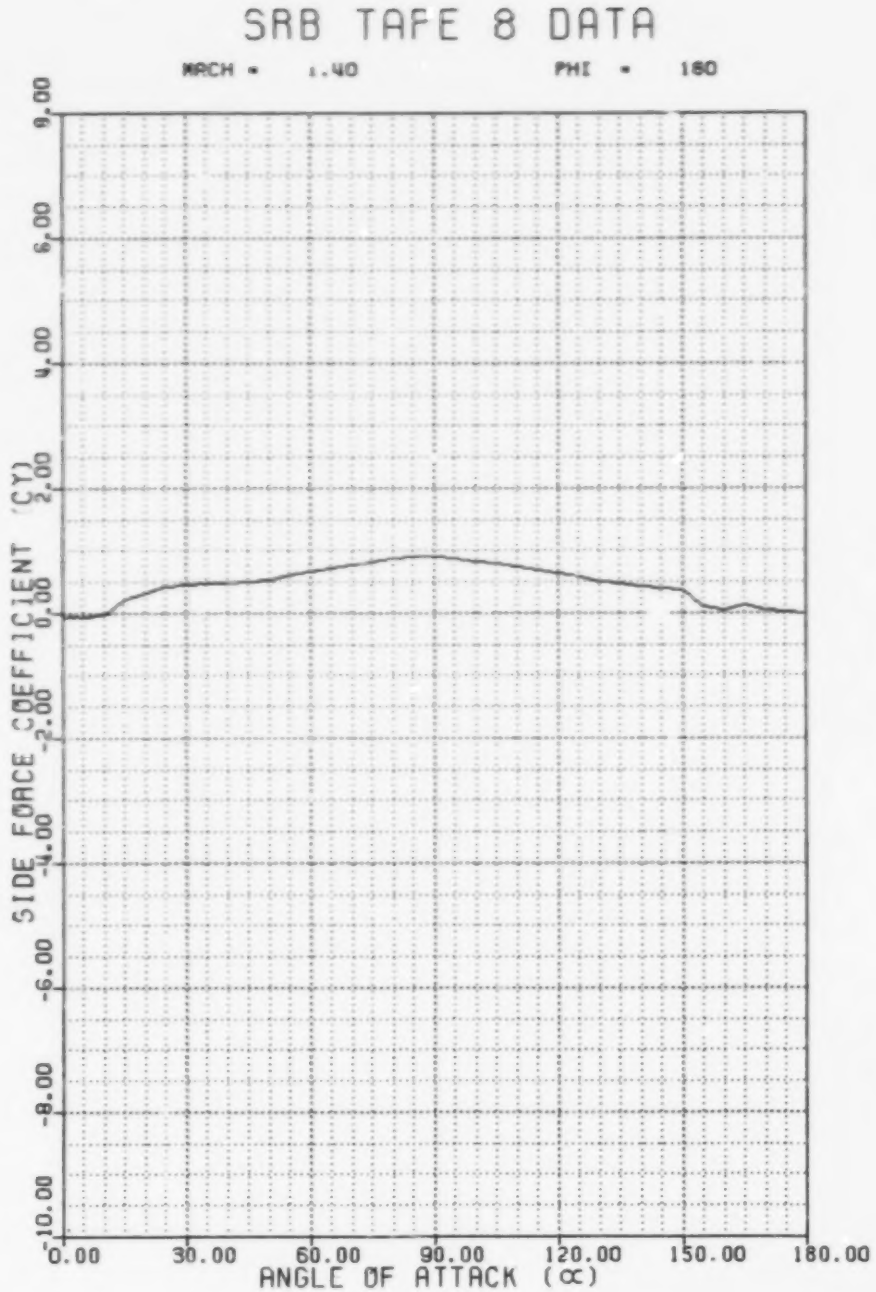
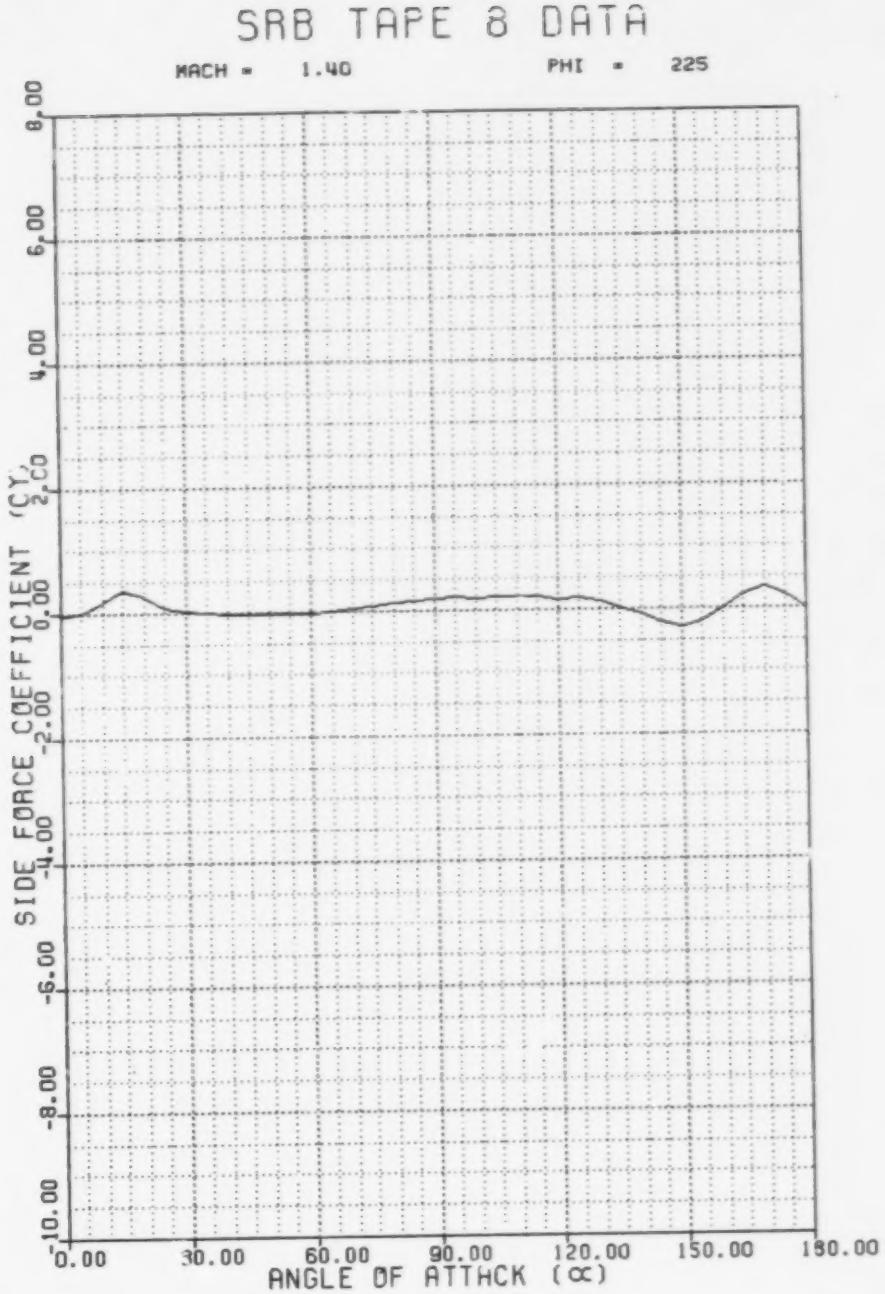
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAFE 8 DATA
MACH = 1.40
PHI = 180
SIDE FORCE COEFFICIENT (CY)
9.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 225
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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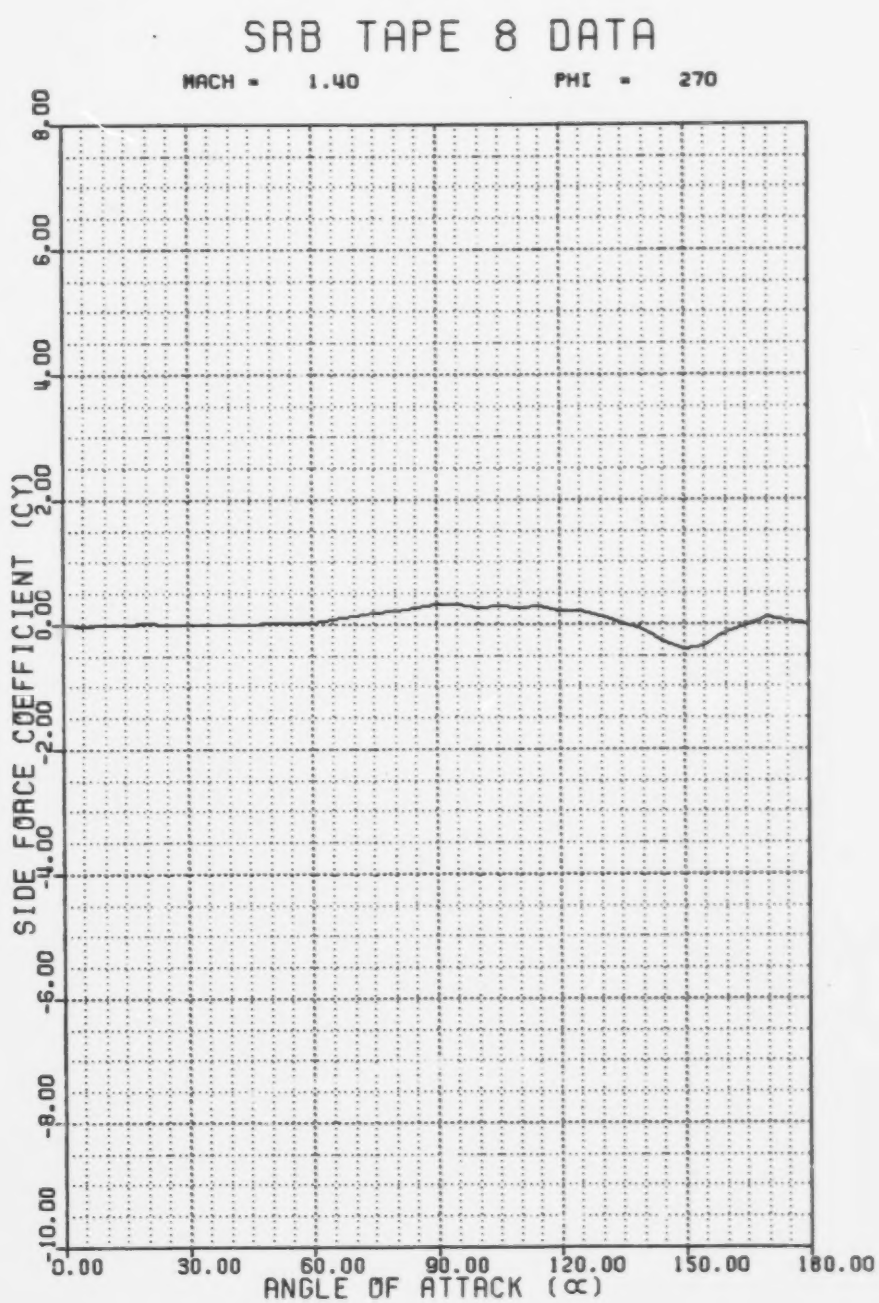
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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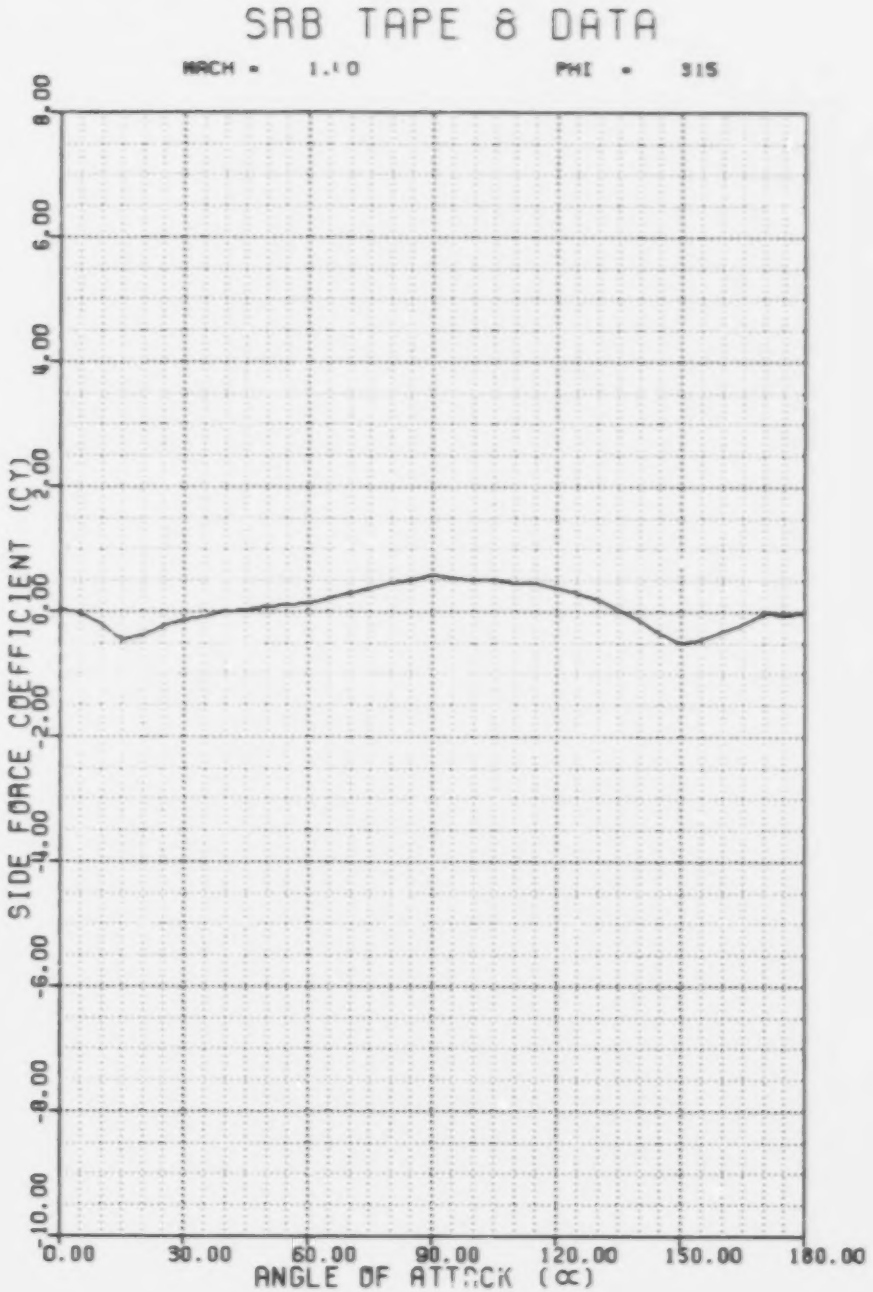
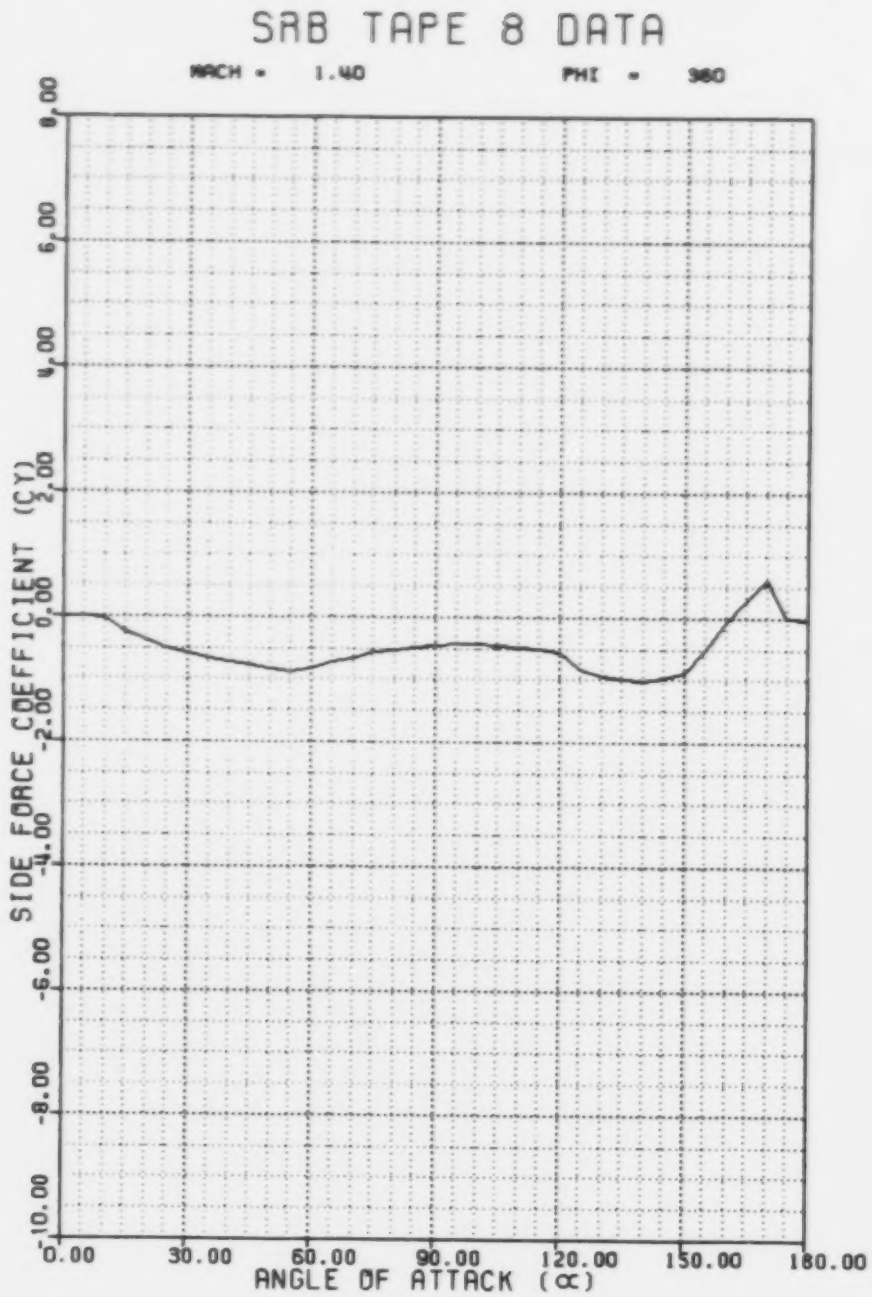
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

ORIGINAL PAGE IS
OF POOR QUALITY

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4.00
2.00
0.00
-2.00
-4.00
-6.00
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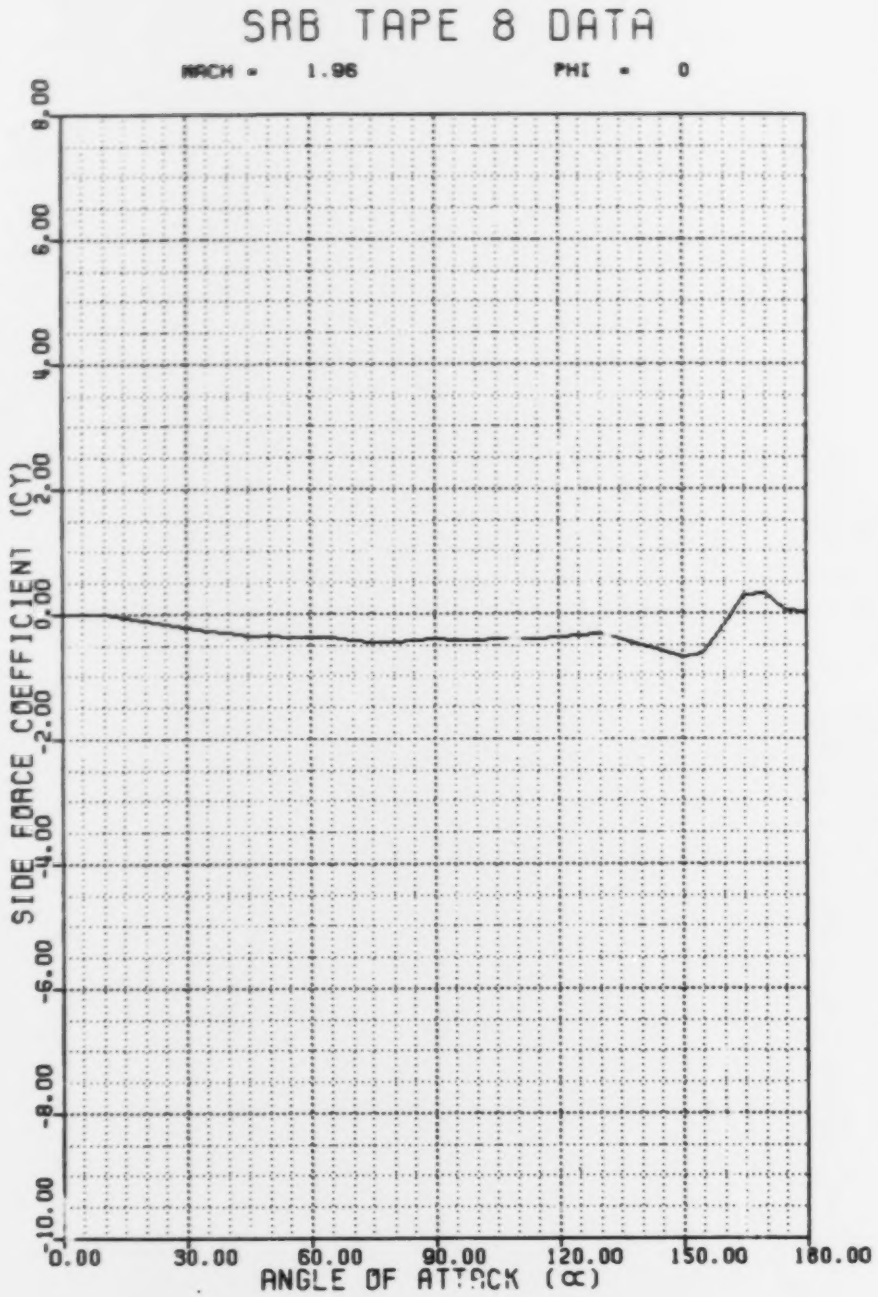
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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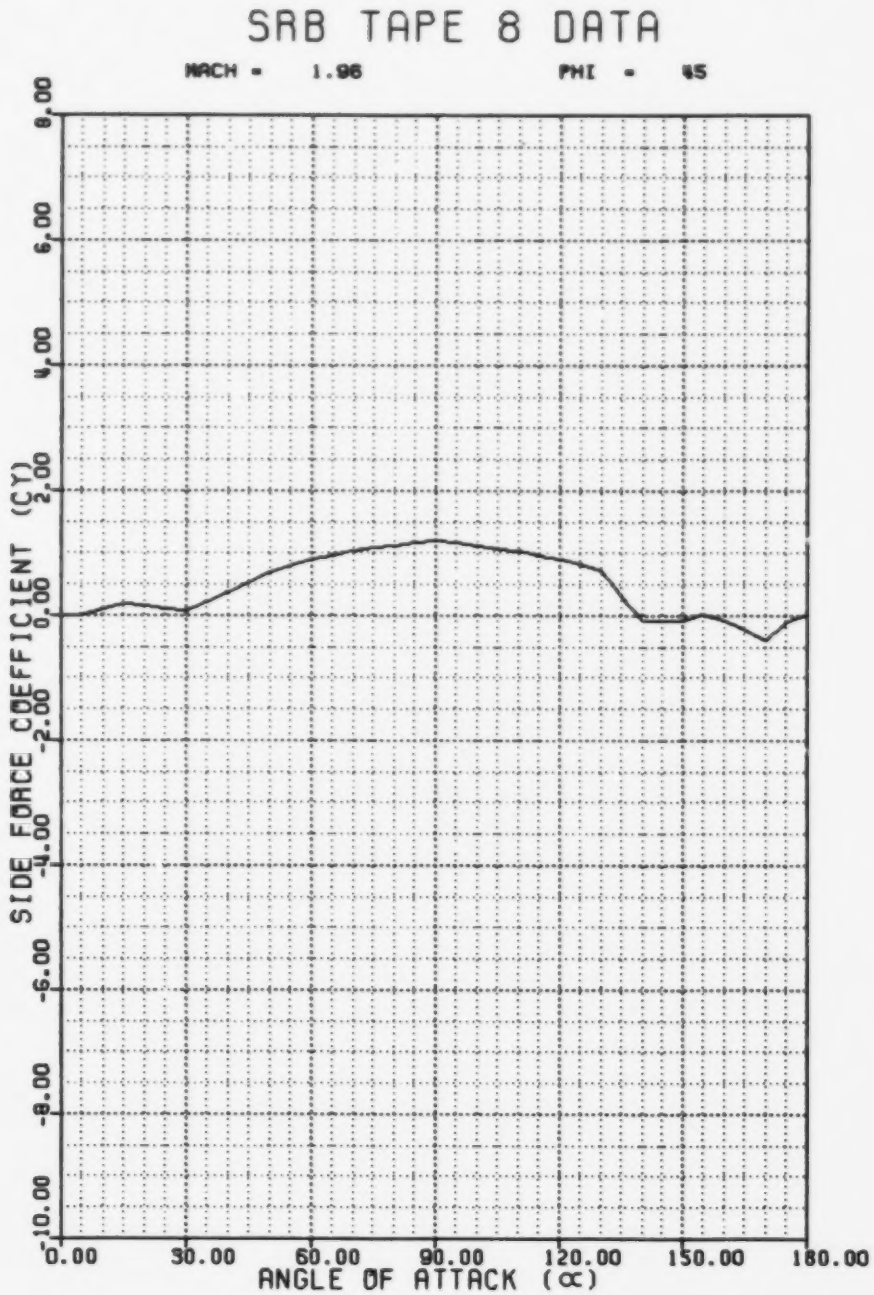
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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0.00
30.00
60.00
90.00
120.00
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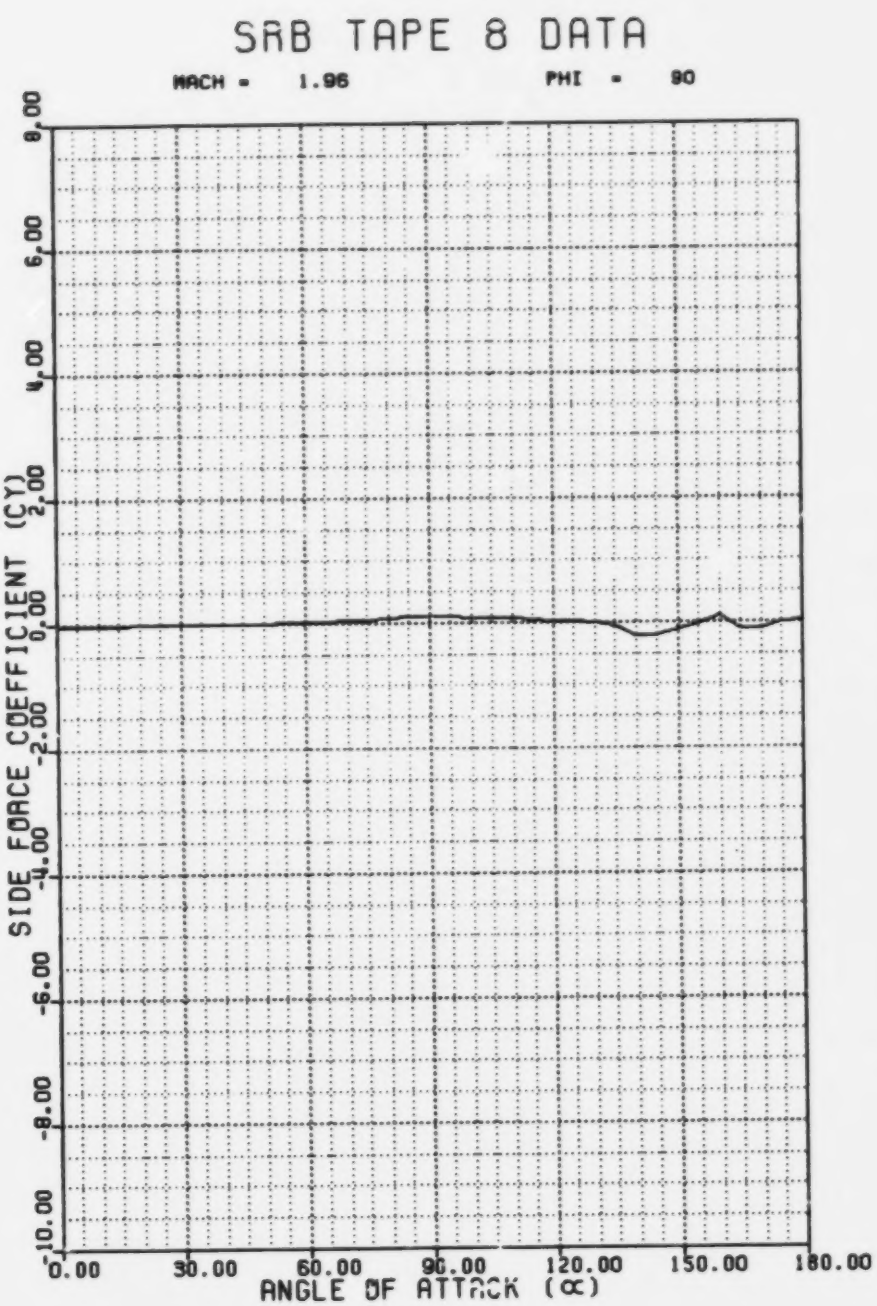
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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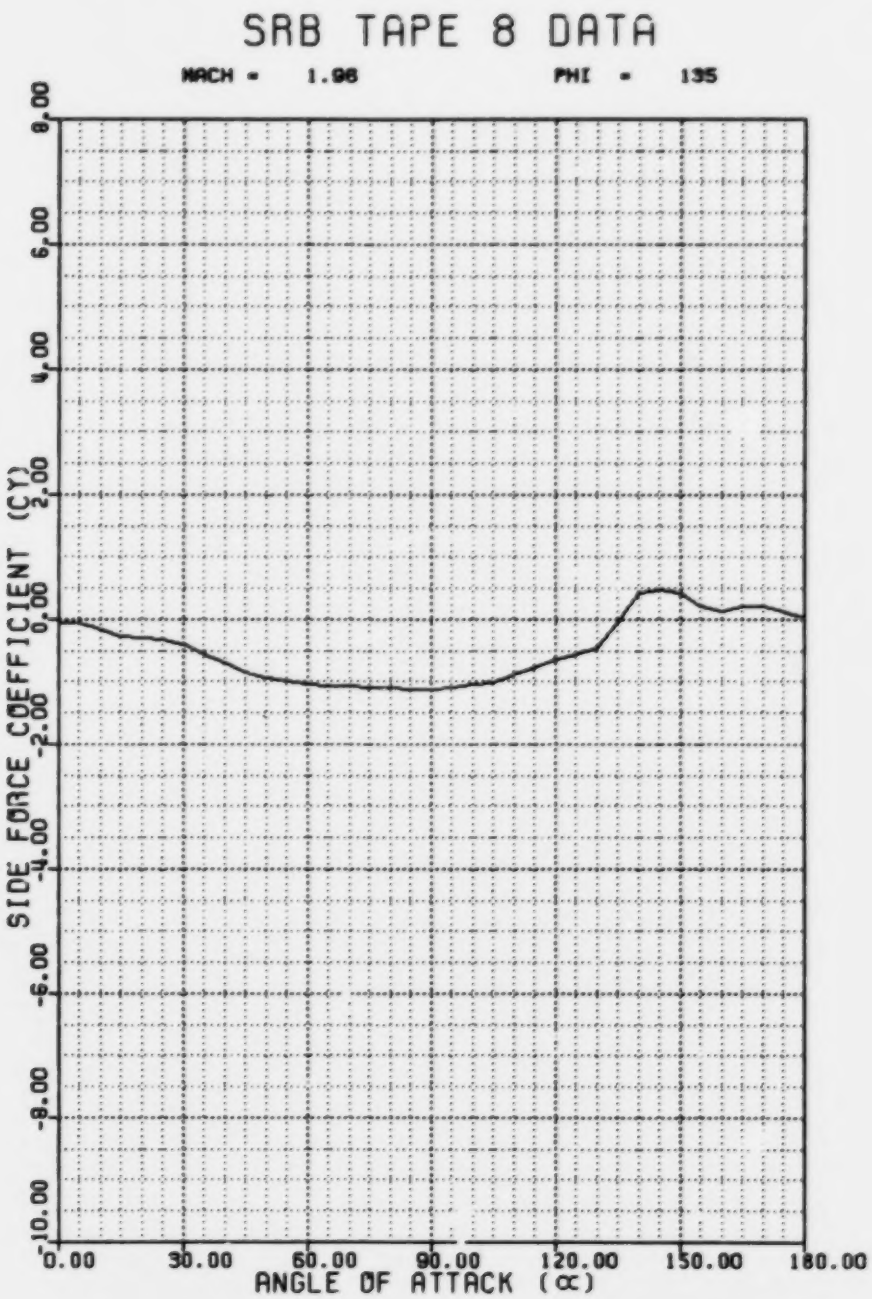
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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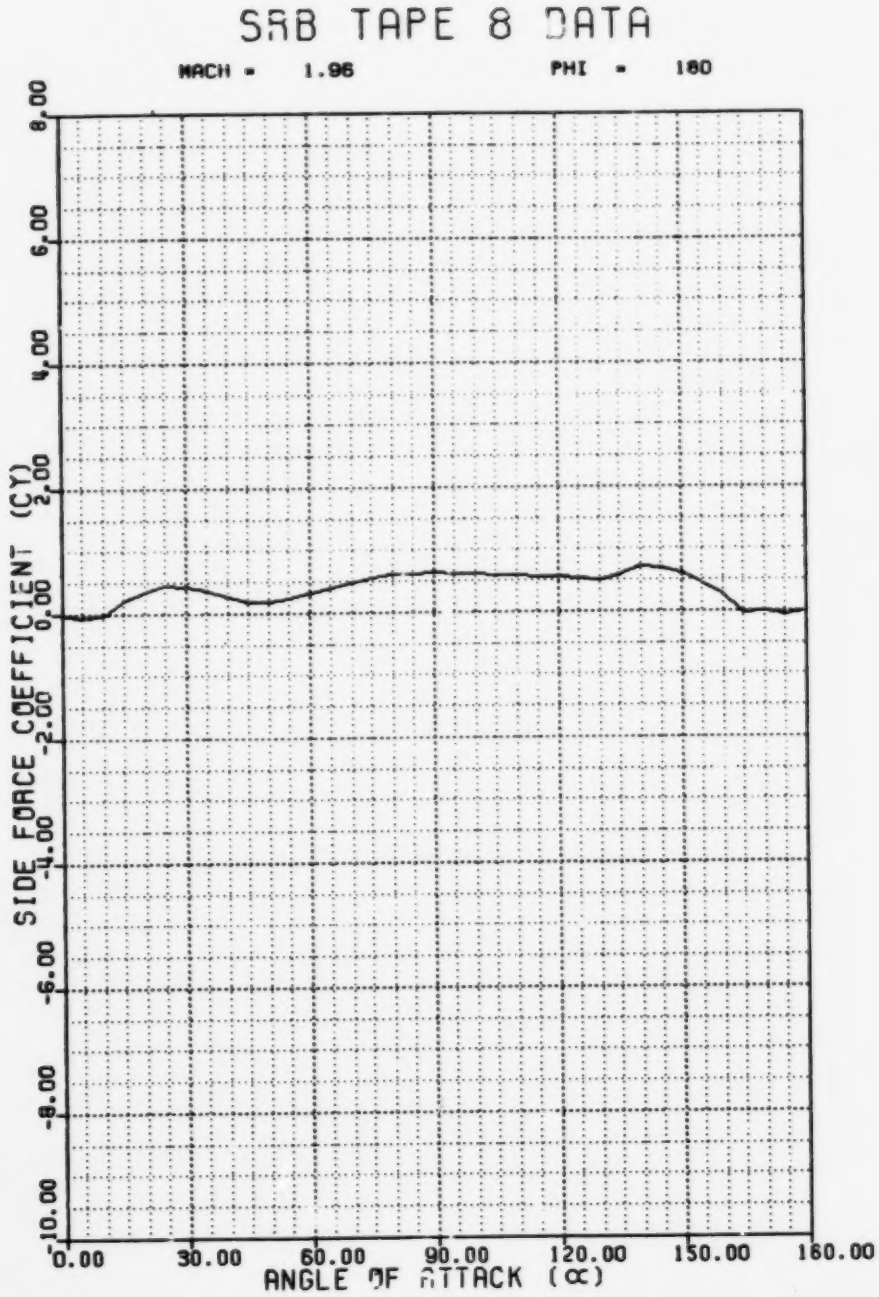
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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0.00
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60.00
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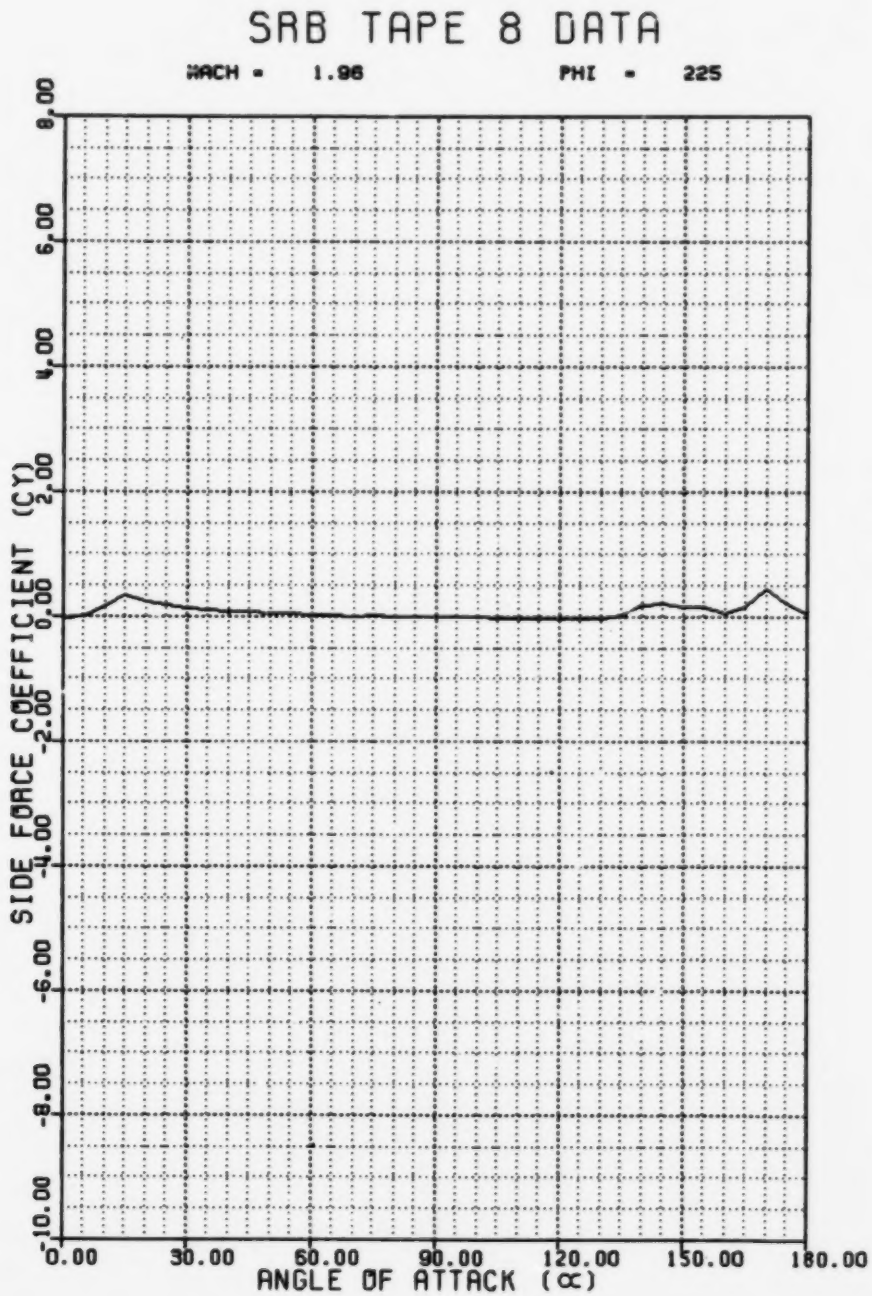
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
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4.00
2.00
0.00
-2.00
-4.00
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0.00
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120.00
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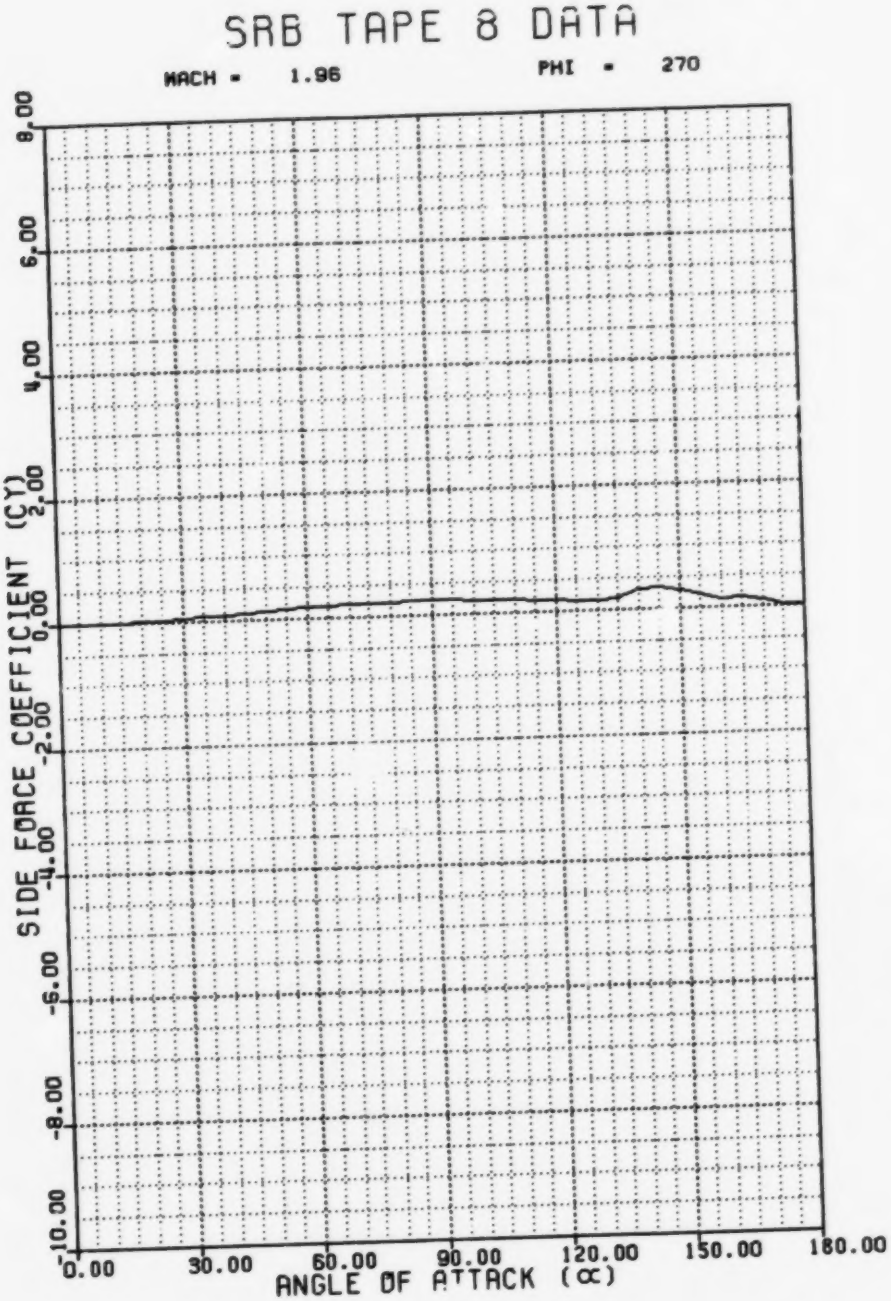
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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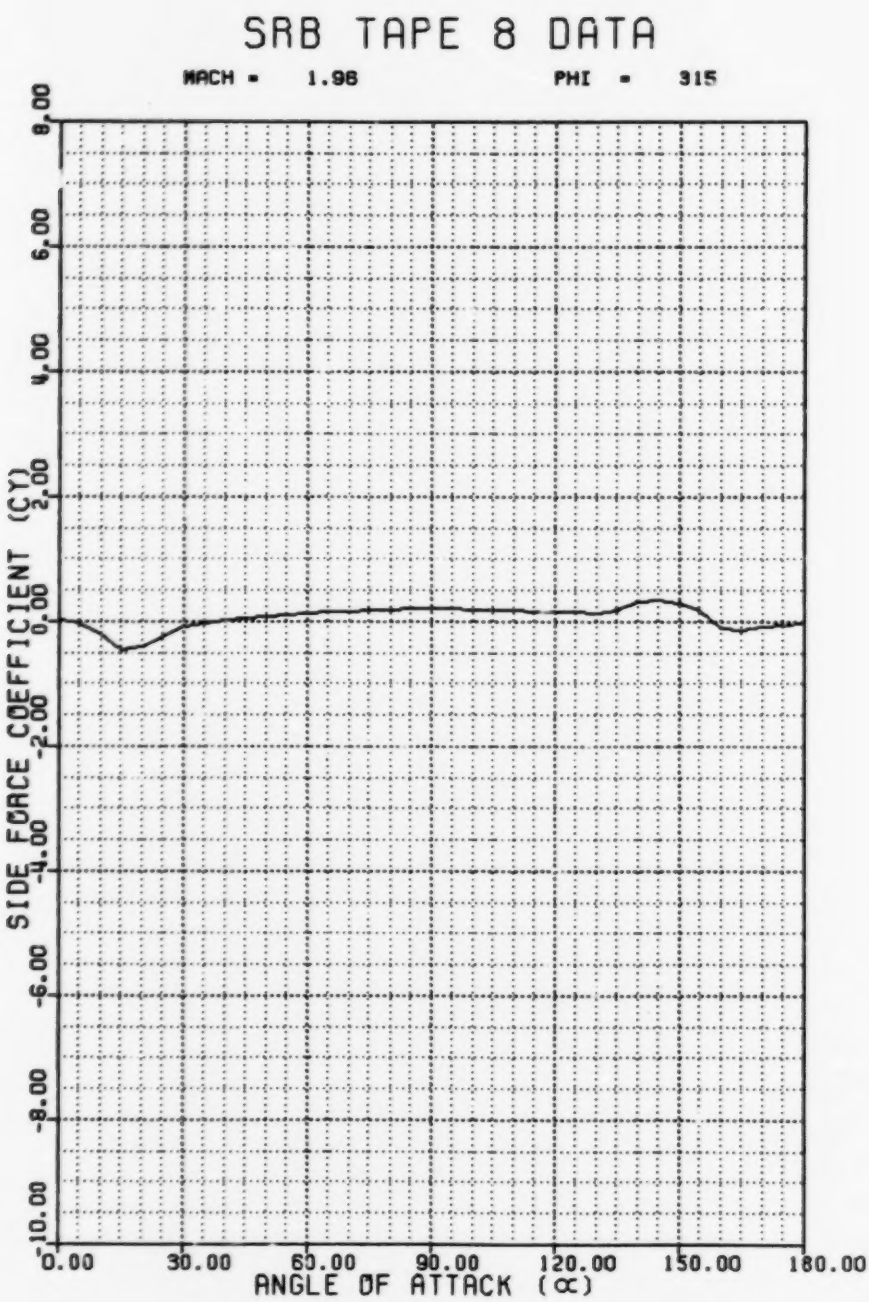
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.98
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SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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0.00
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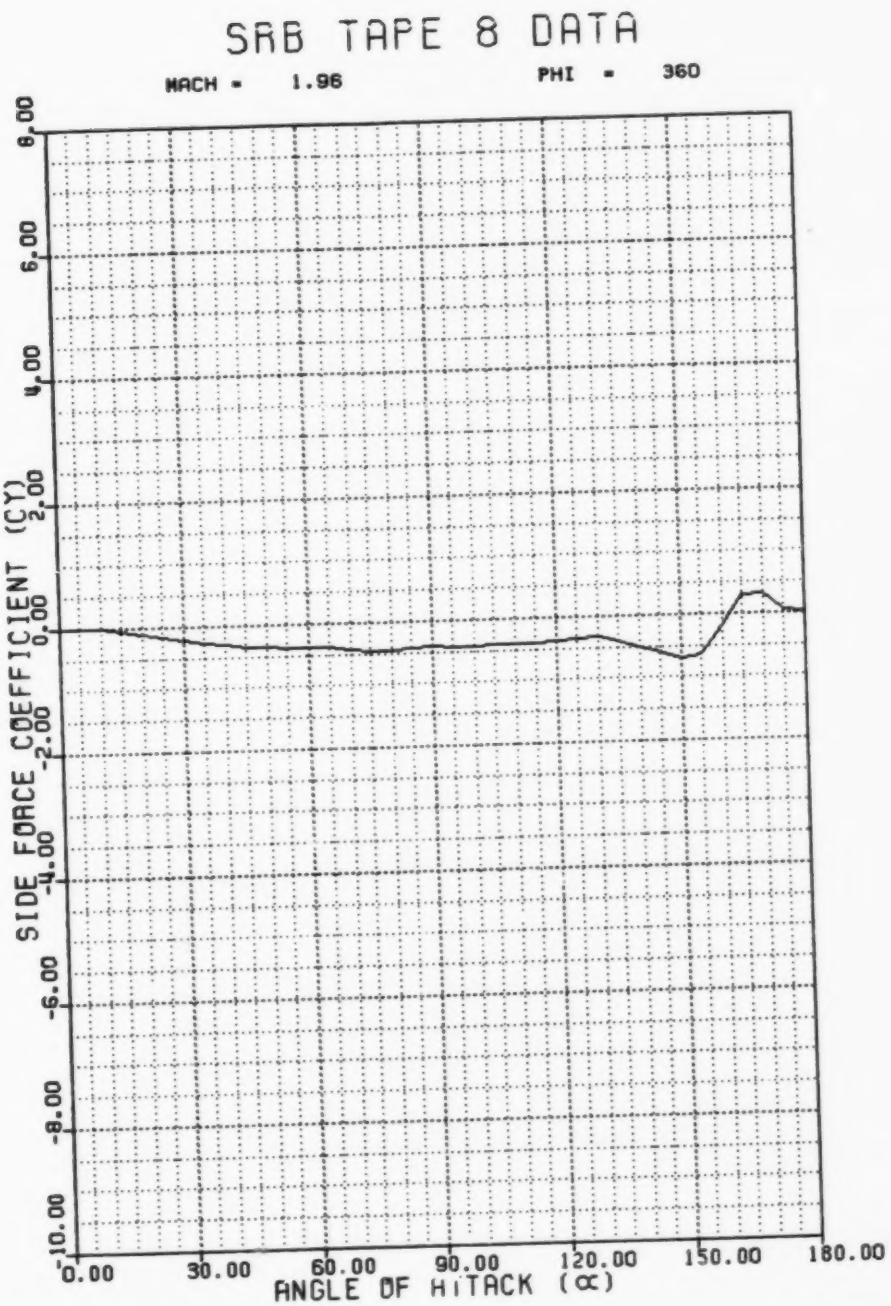
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 360
SIDE FORCE COEFFICIENT (CY)
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6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
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0.00
30.00
60.00
90.00
120.00
150.00
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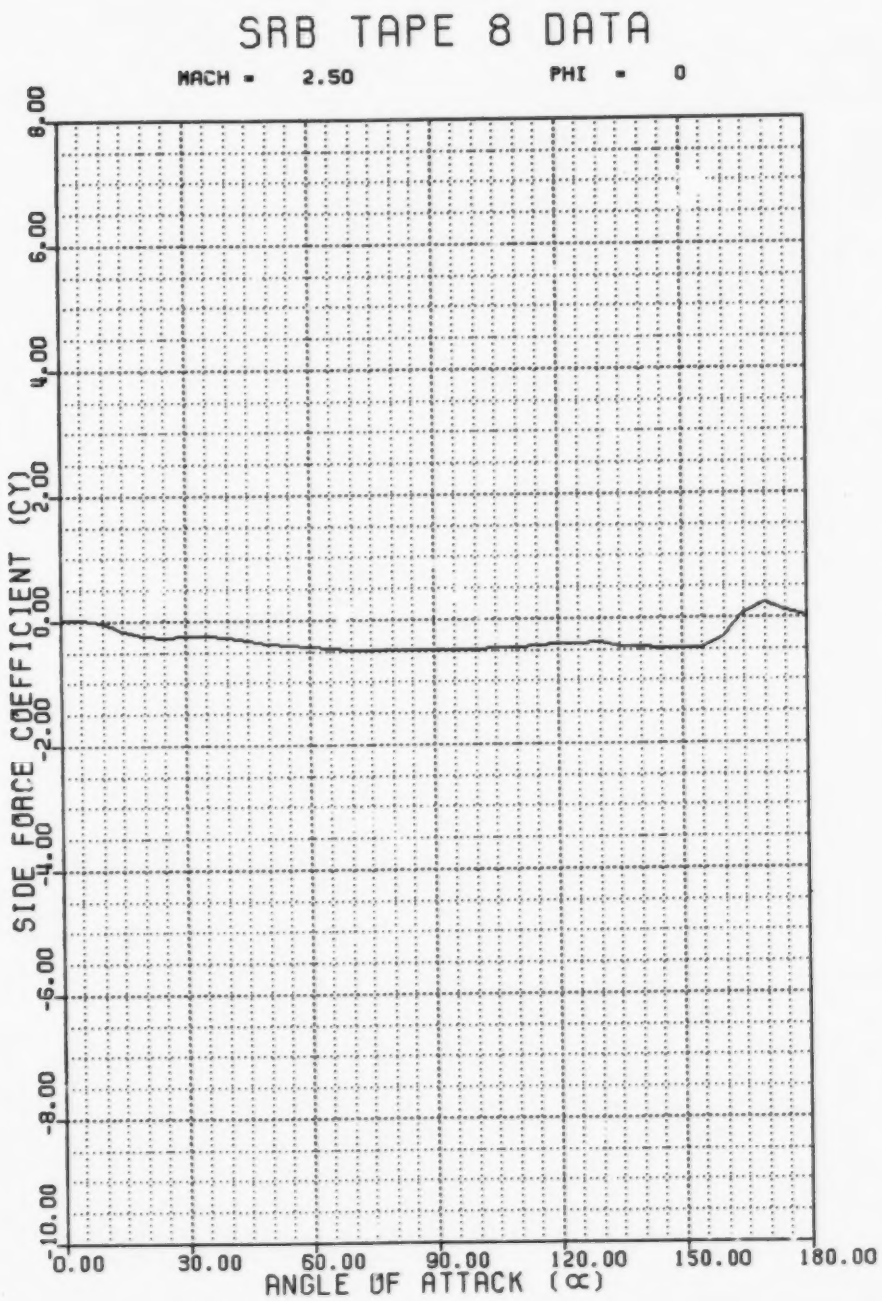
ANGLE OF HITACK (α)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-2.00
-4.00
-6.00
-8.00
-10.00
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30.00
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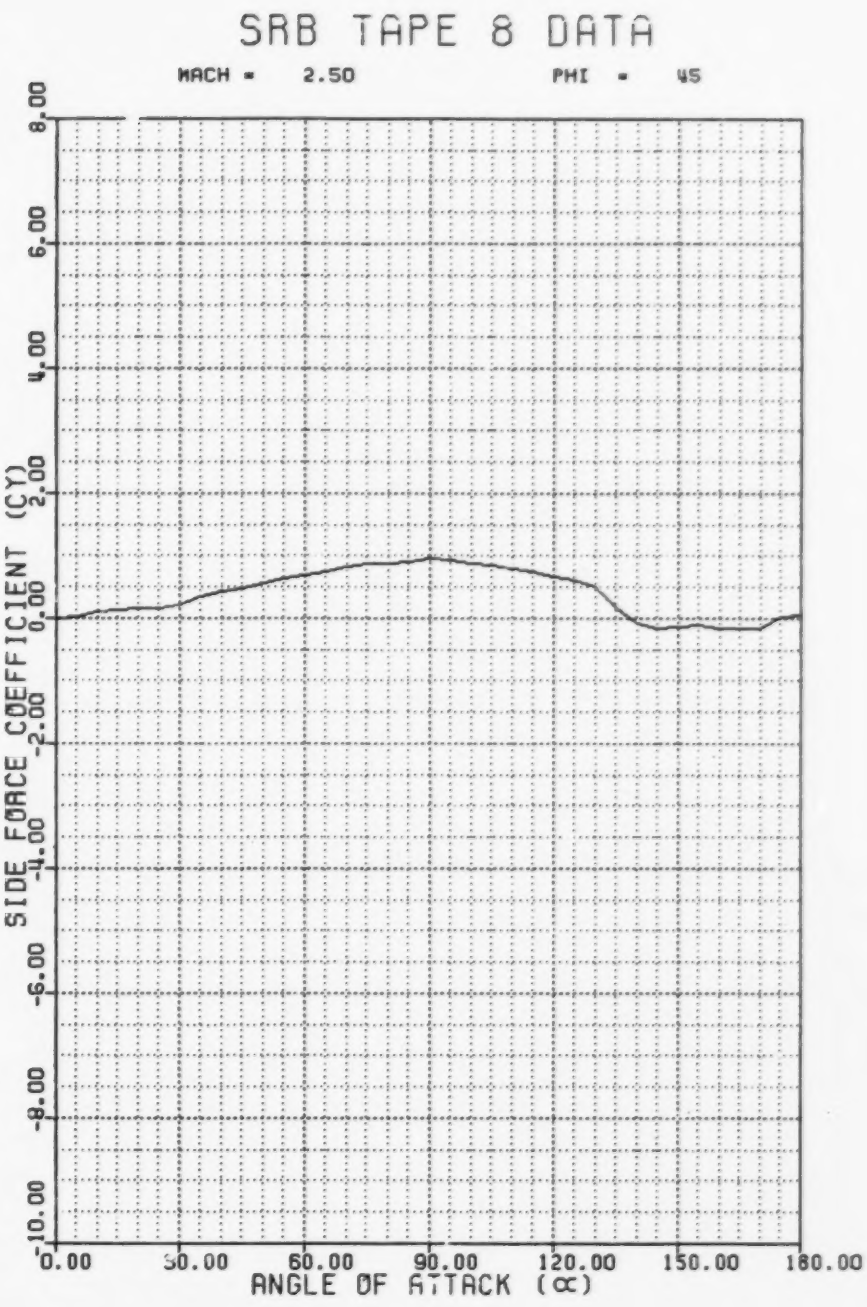
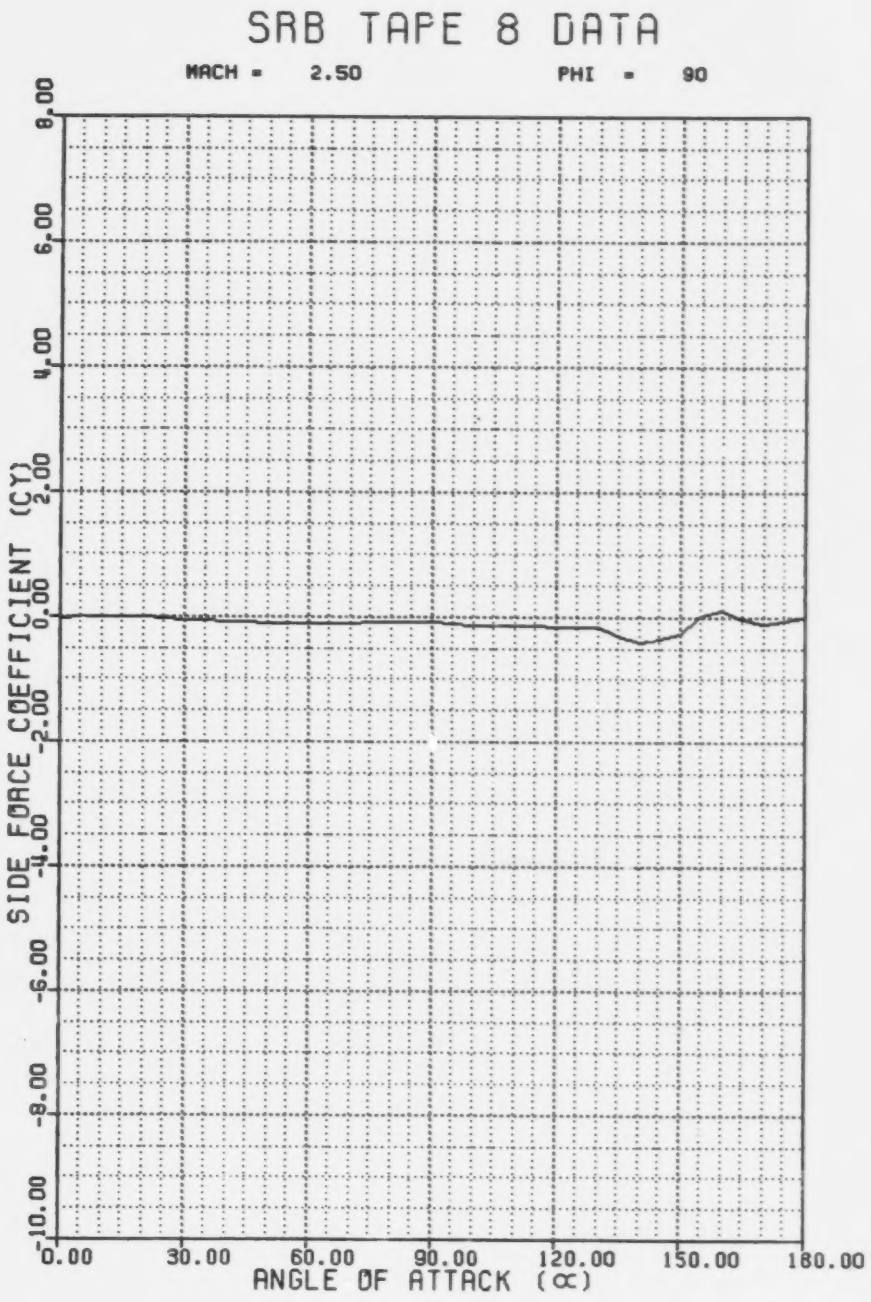
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

ORIGINAL PAGE IS
OF POOR QUALITY




SRB TAPE 8 DATA
MACH = 2.50
PHI = 90
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
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0.00
30.00
60.00
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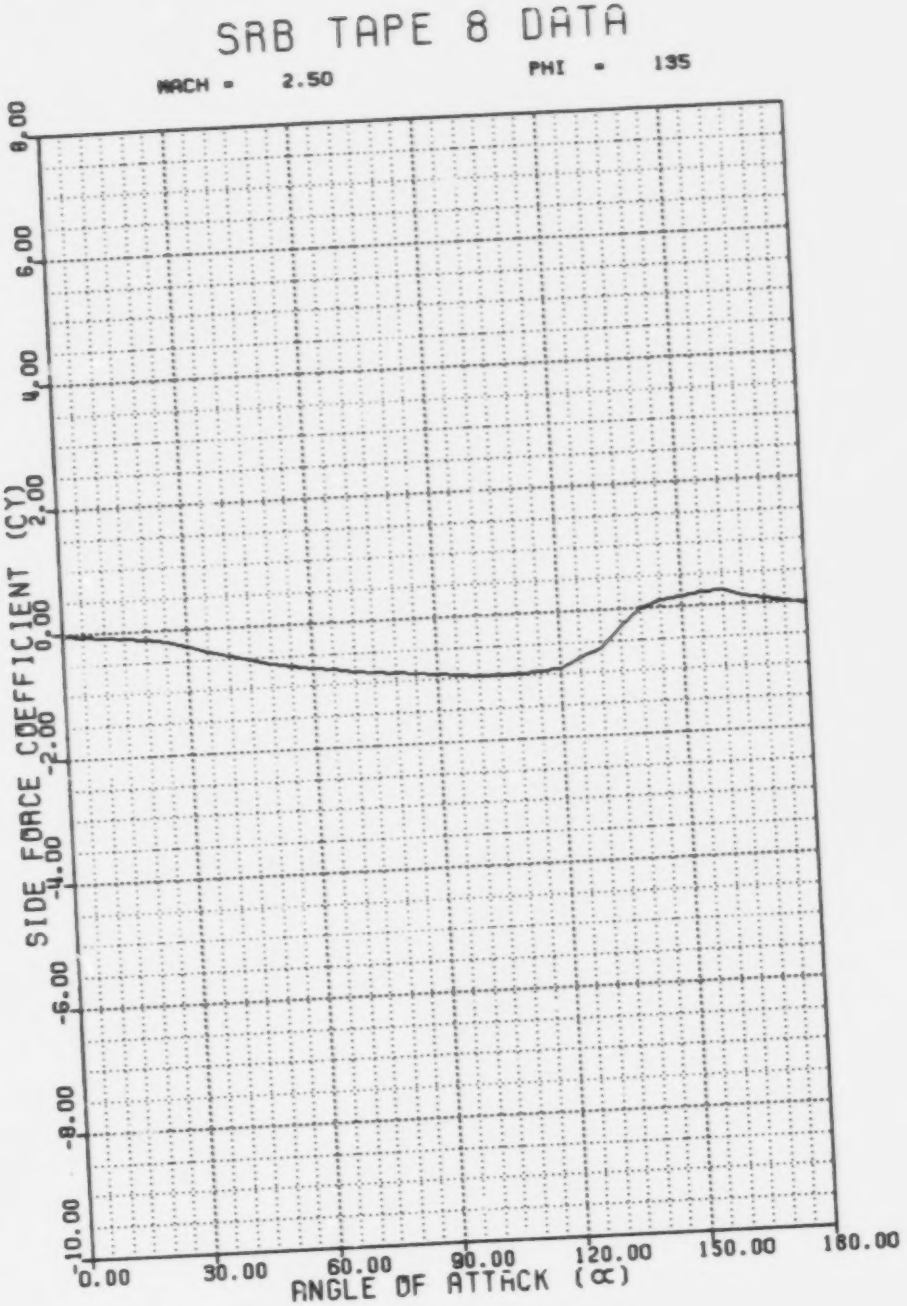
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 135
SIDE FORCE COEFFICIENT (CY)
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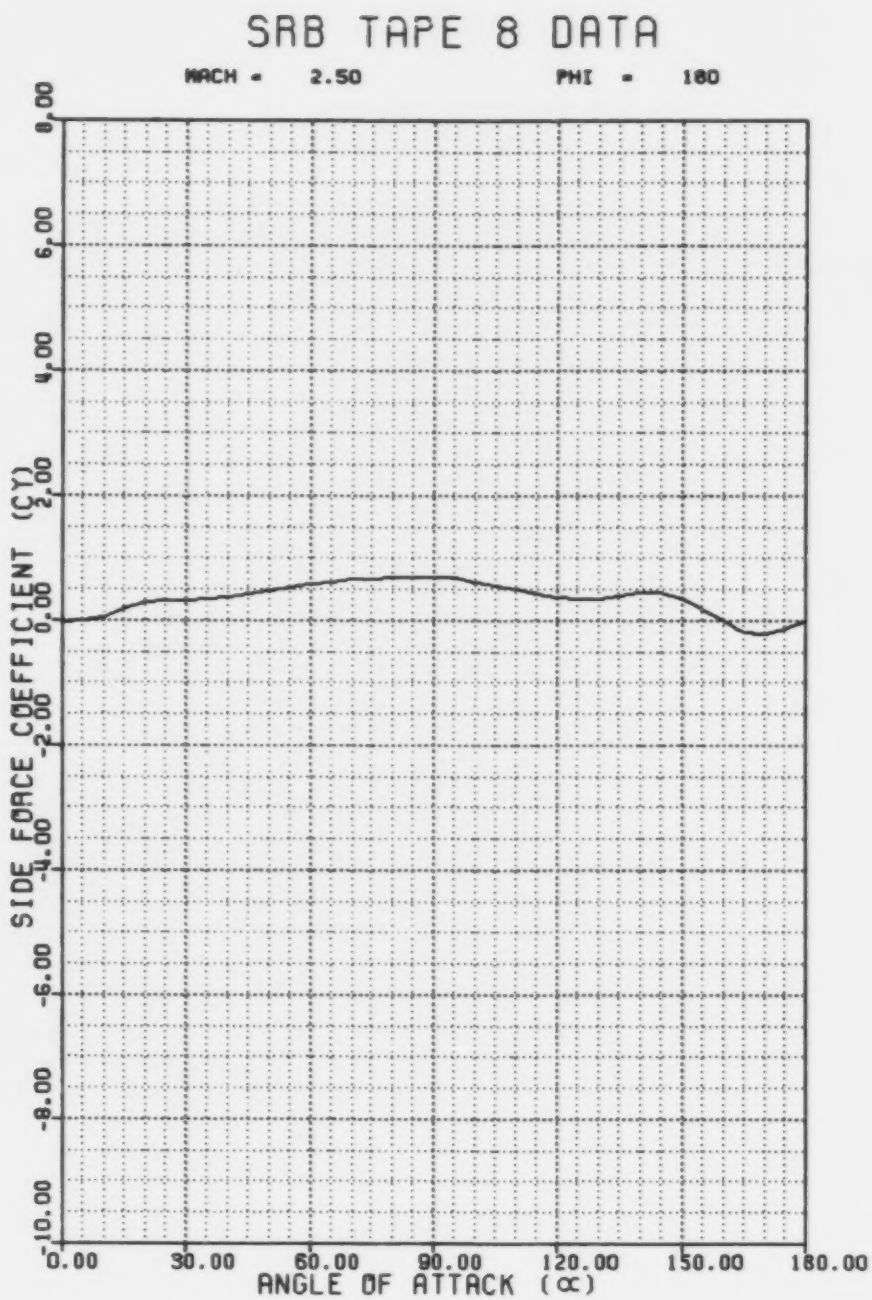
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 180
SIDE FORCE COEFFICIENT (CY)
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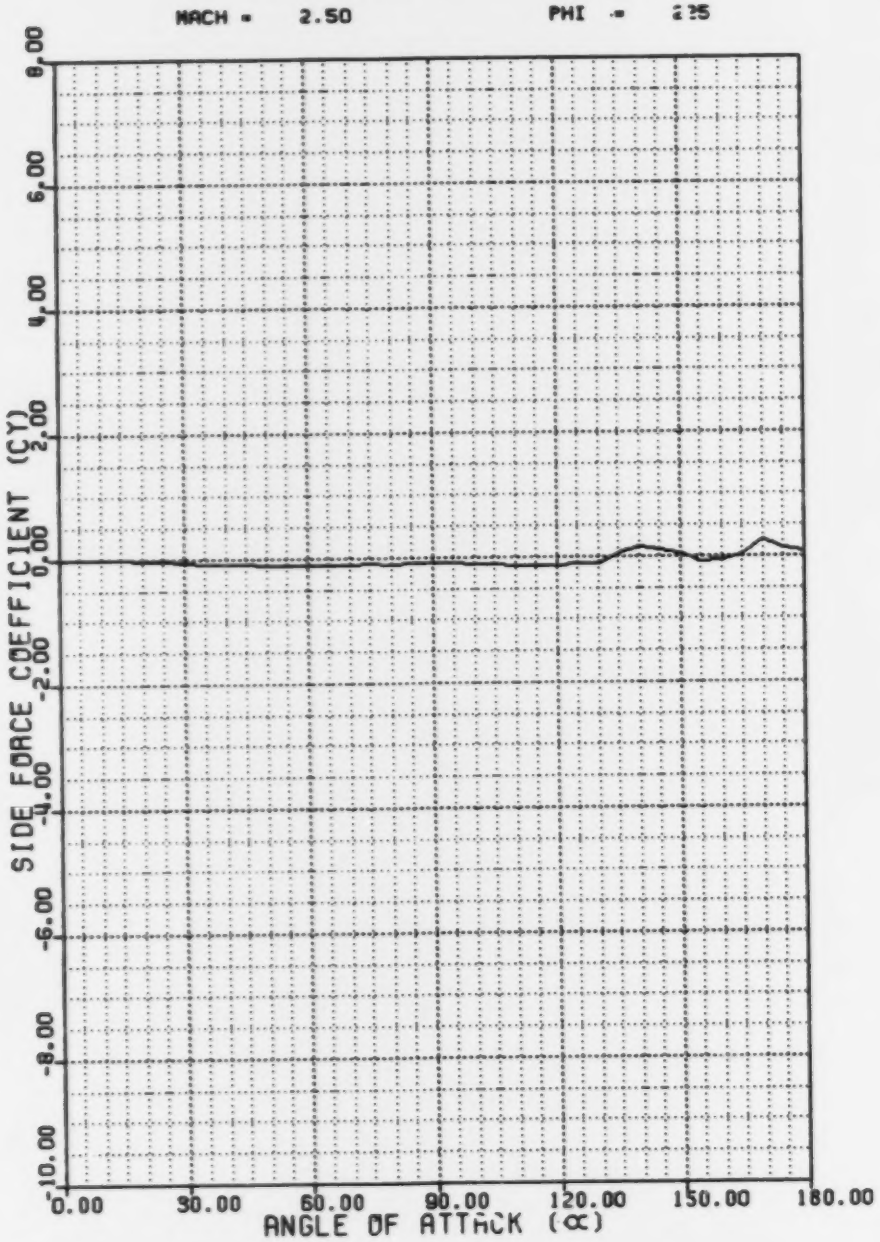
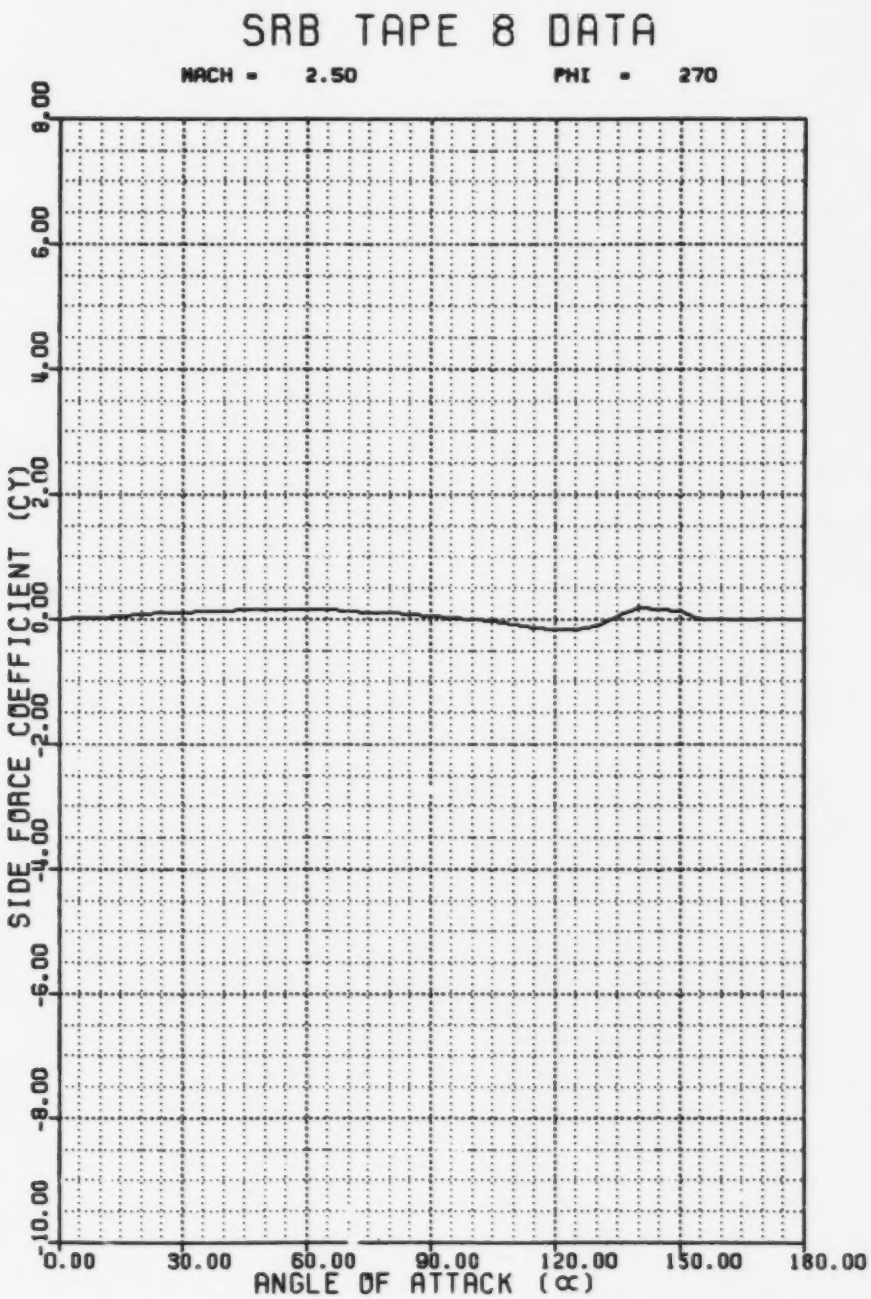
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 2.50 PHI = 225




SRB TAPE 8 DATA
MACH = 2.50
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
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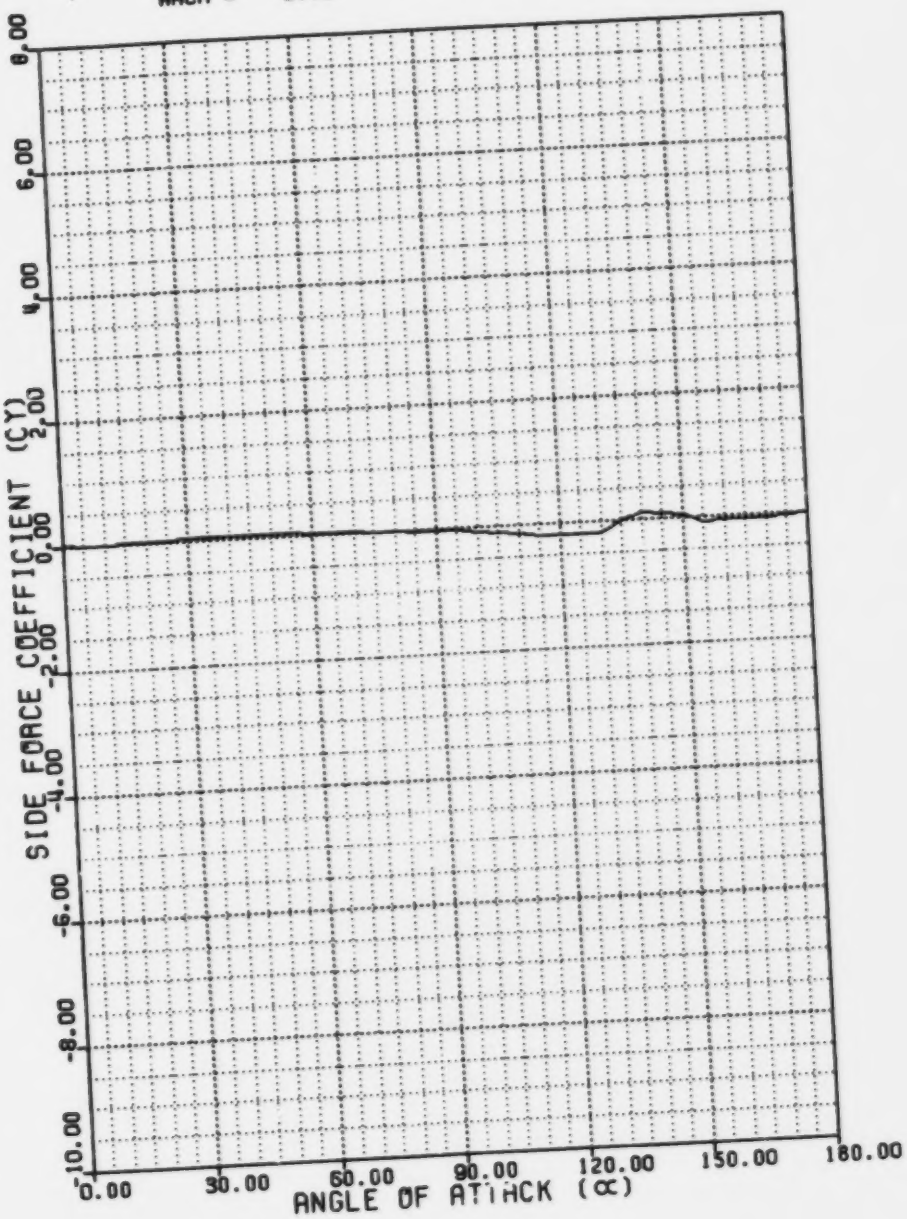
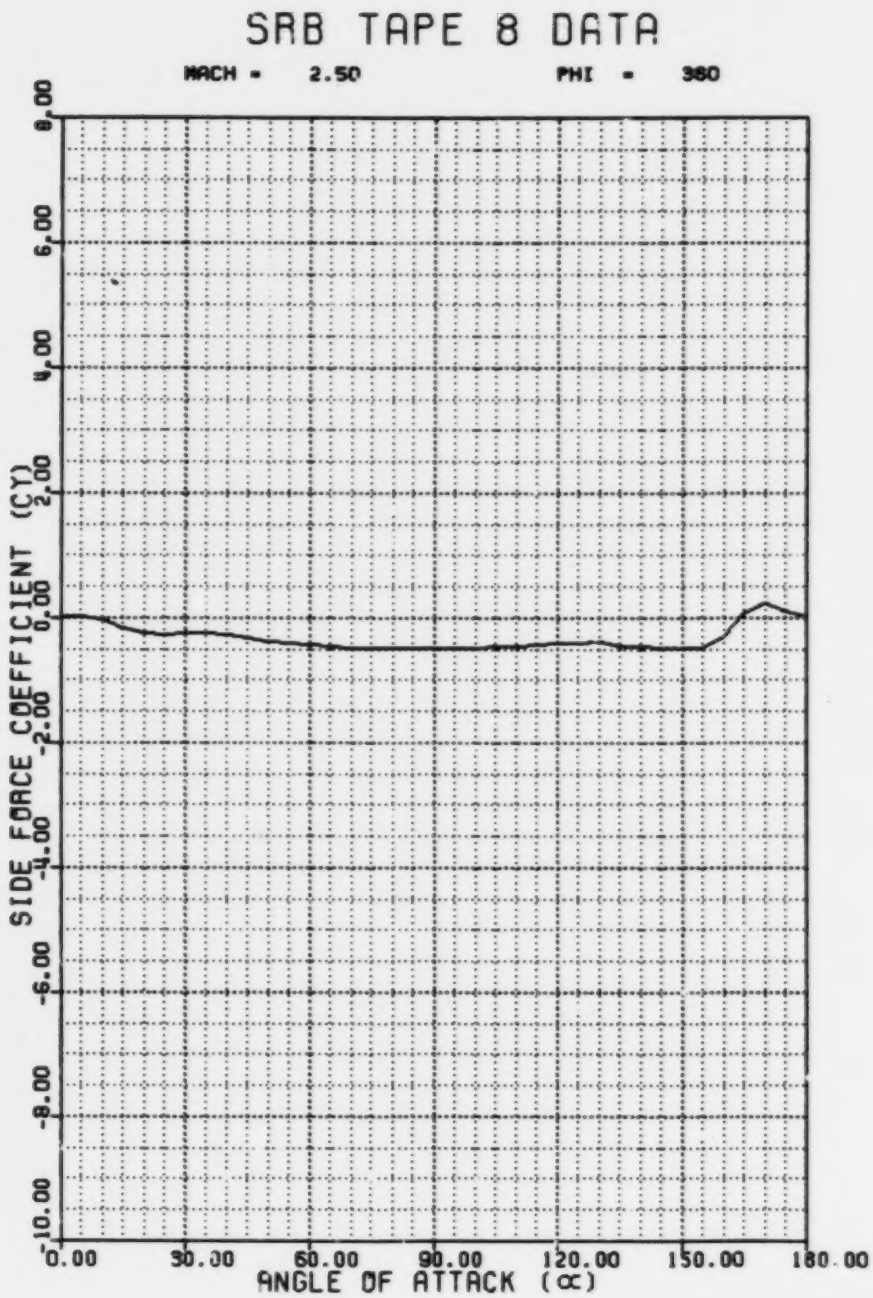
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 2.50 PHI = 315




SRB TAPE 8 DATA
MACH = 2.50
PHI = 360
SIDE FORCE COEFFICIENT (CY)
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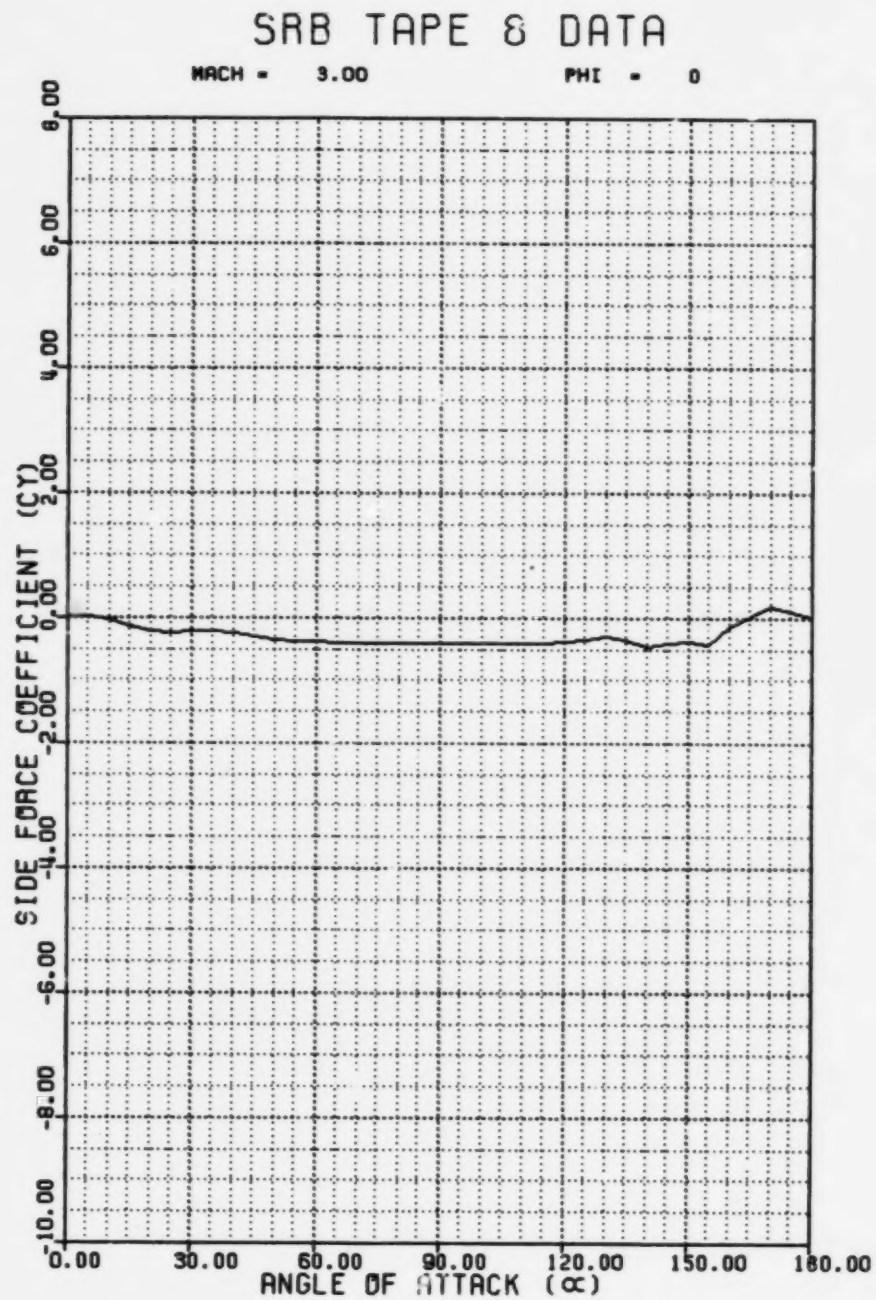
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 0
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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0.00
30.00
60.00
90.00
120.00
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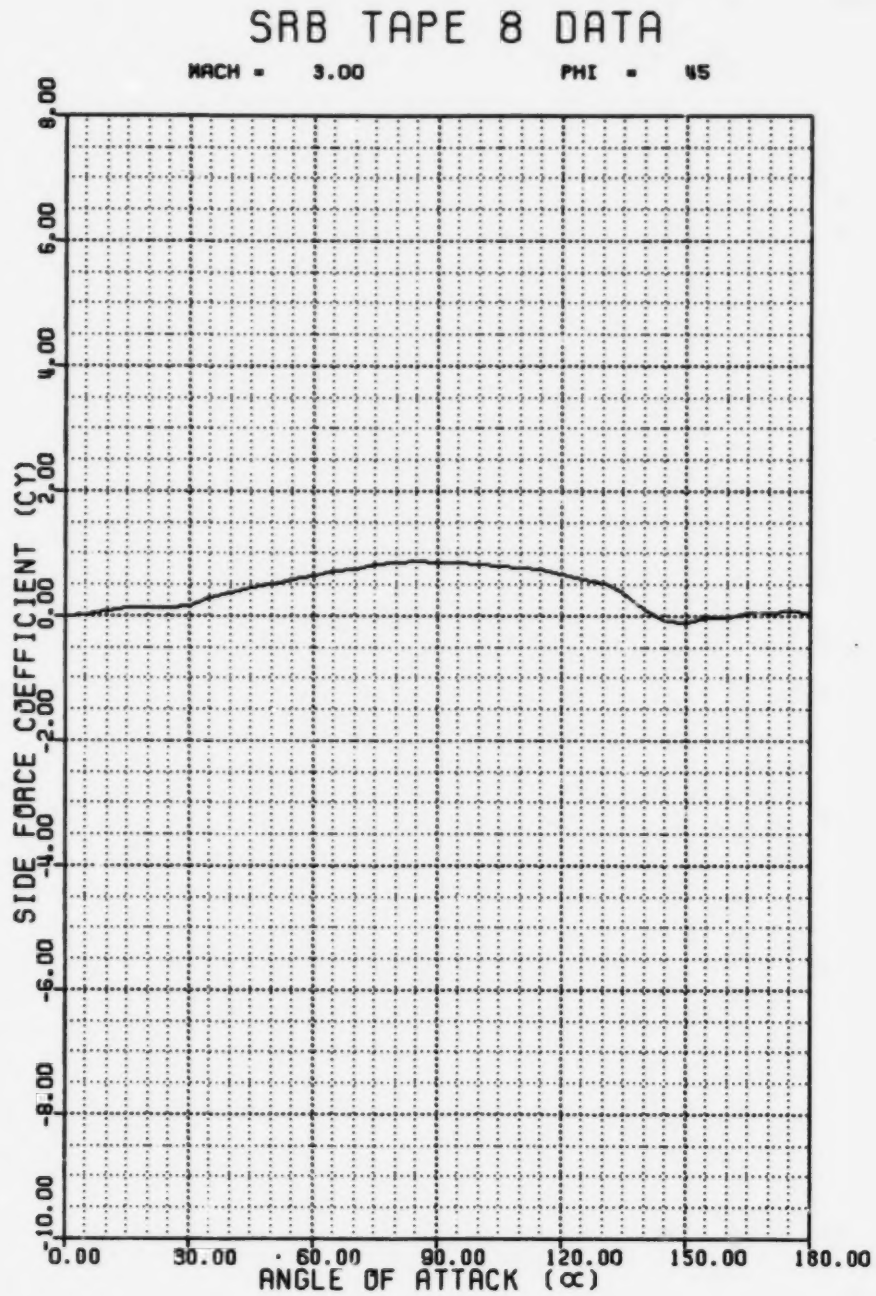
180.00
ANGLE OF ATTACK (α)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PHI = 45
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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0.00
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60.00
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120.00
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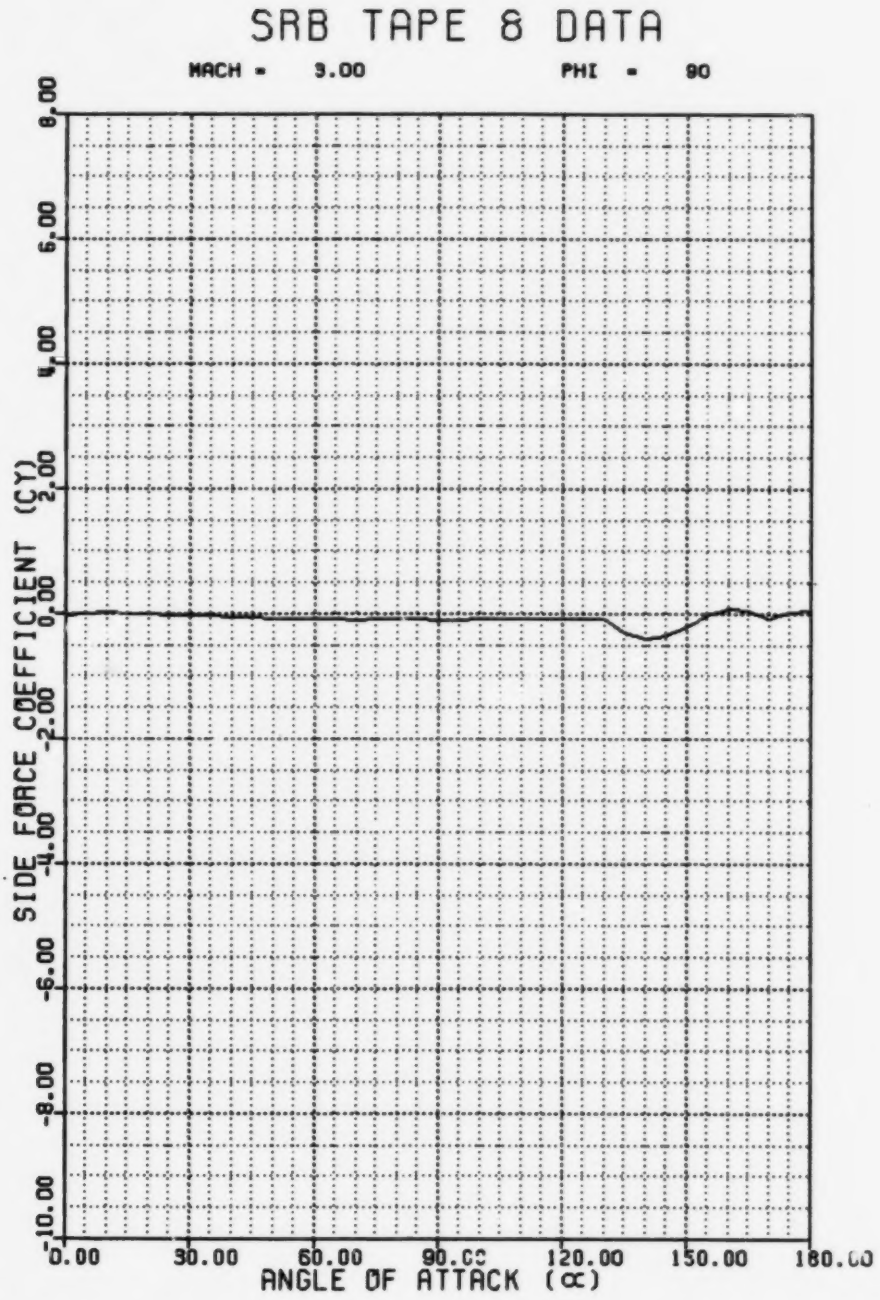
180.00
ANGLE OF ATTACK (α)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4.00
2.00
0.00
-2.00
-4.00
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0.00
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60.00
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120.00
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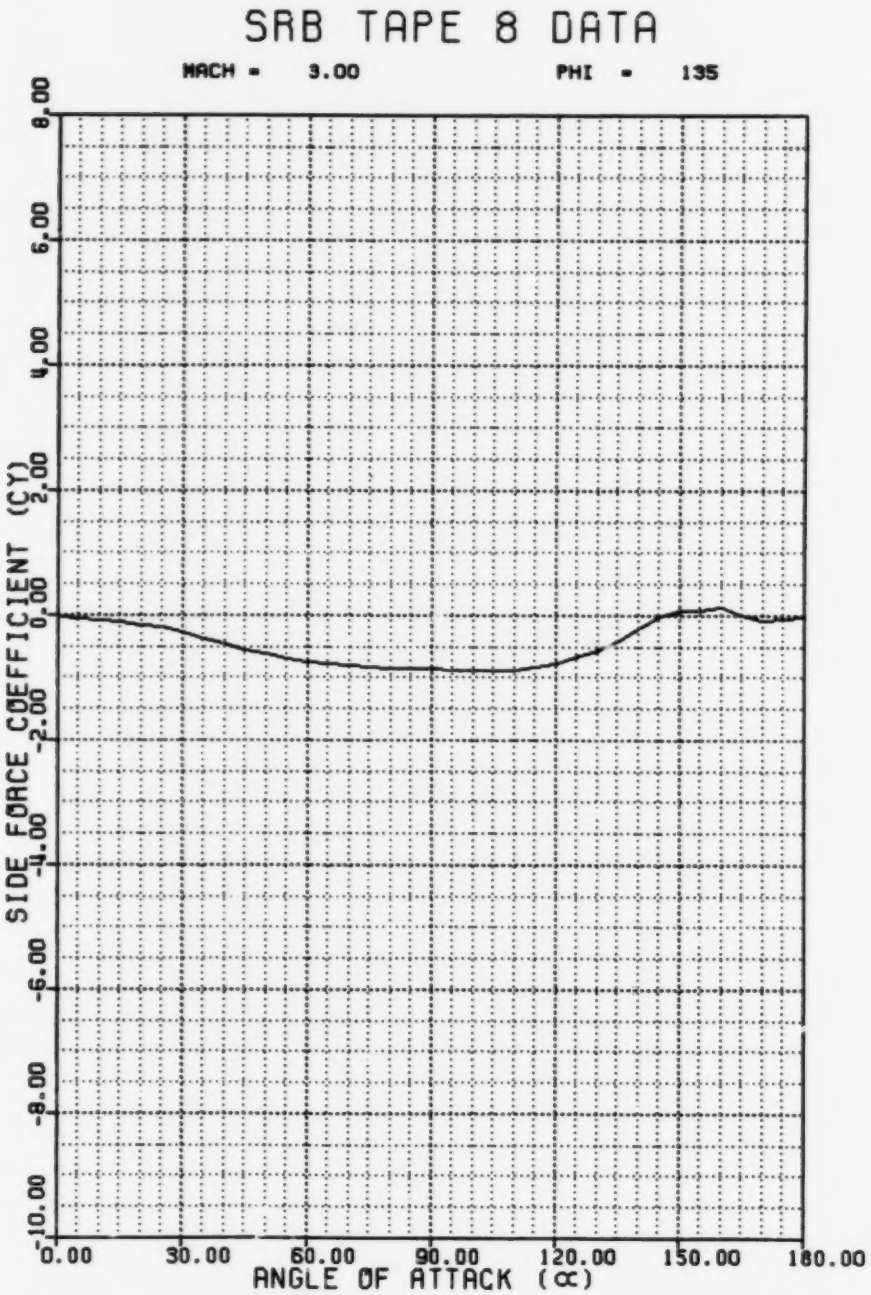
180.00
ANGLE OF ATTACK (α)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4.00
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0.00
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120.00
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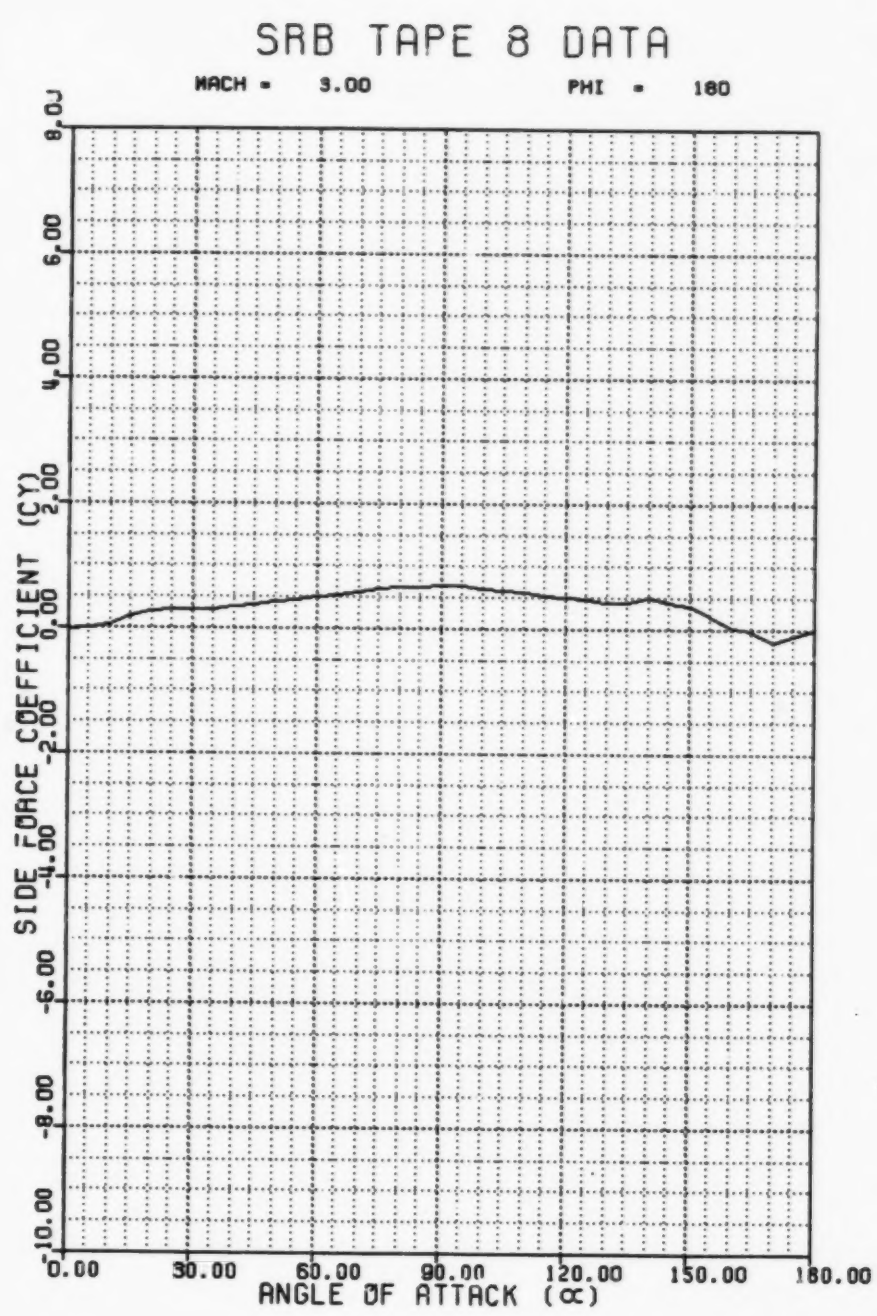
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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0.00
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60.00
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120.00
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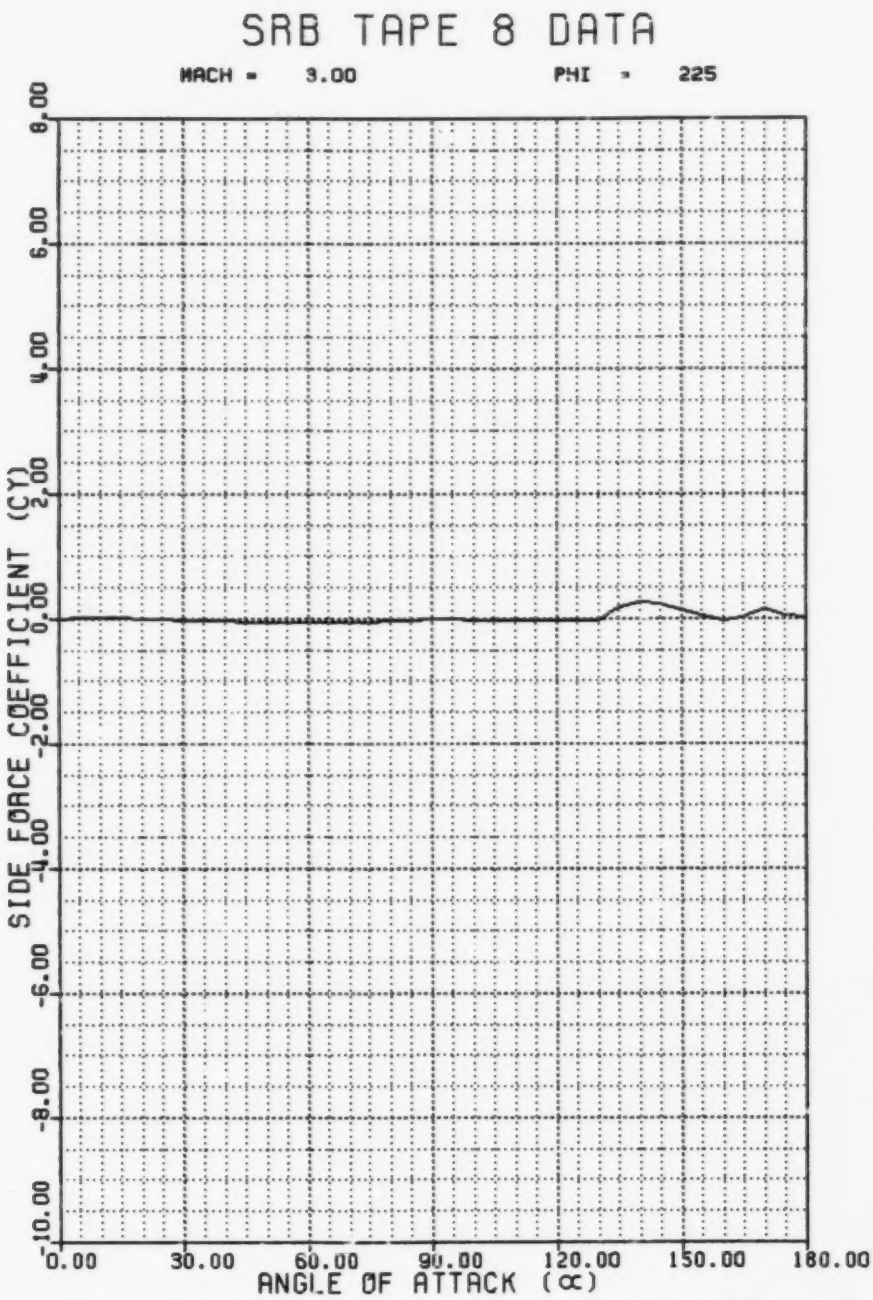
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 225
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
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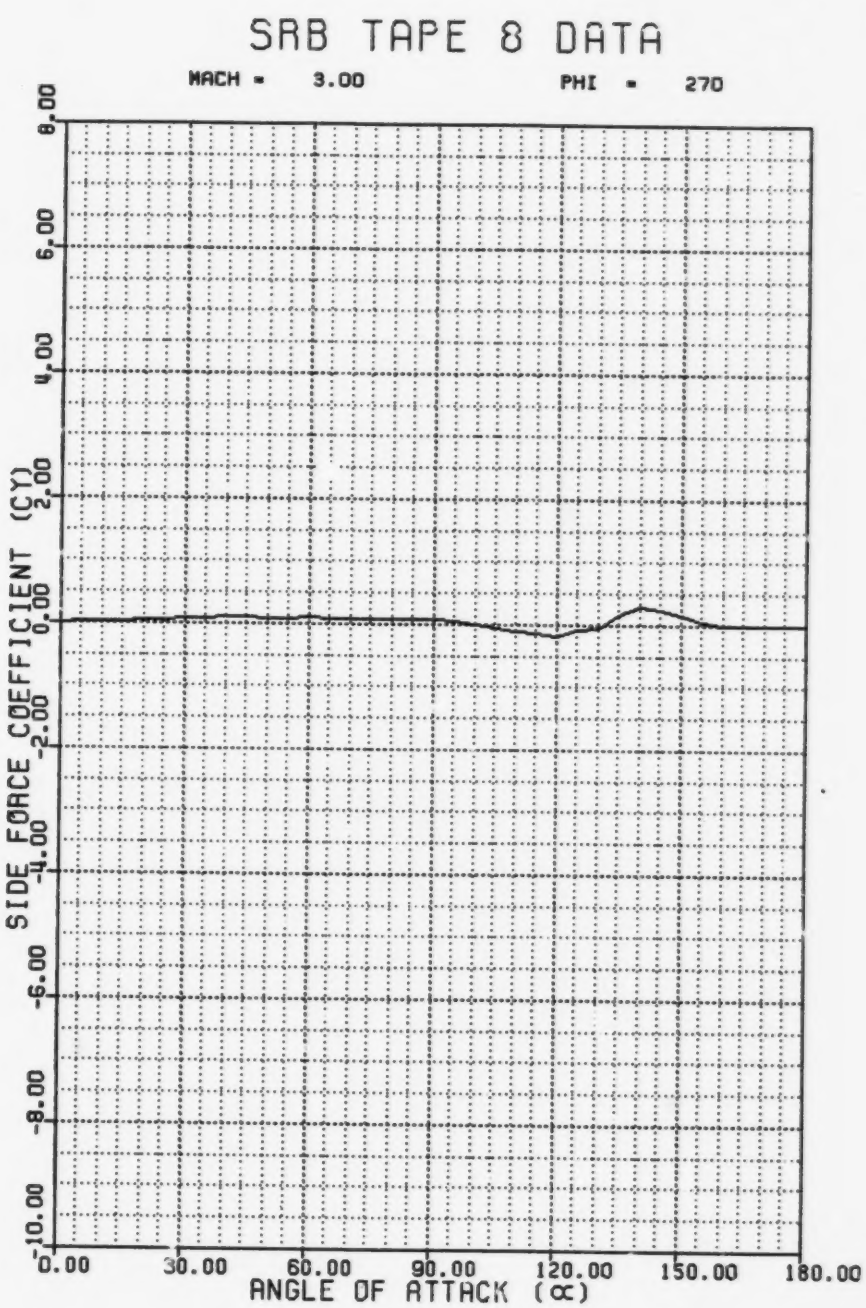
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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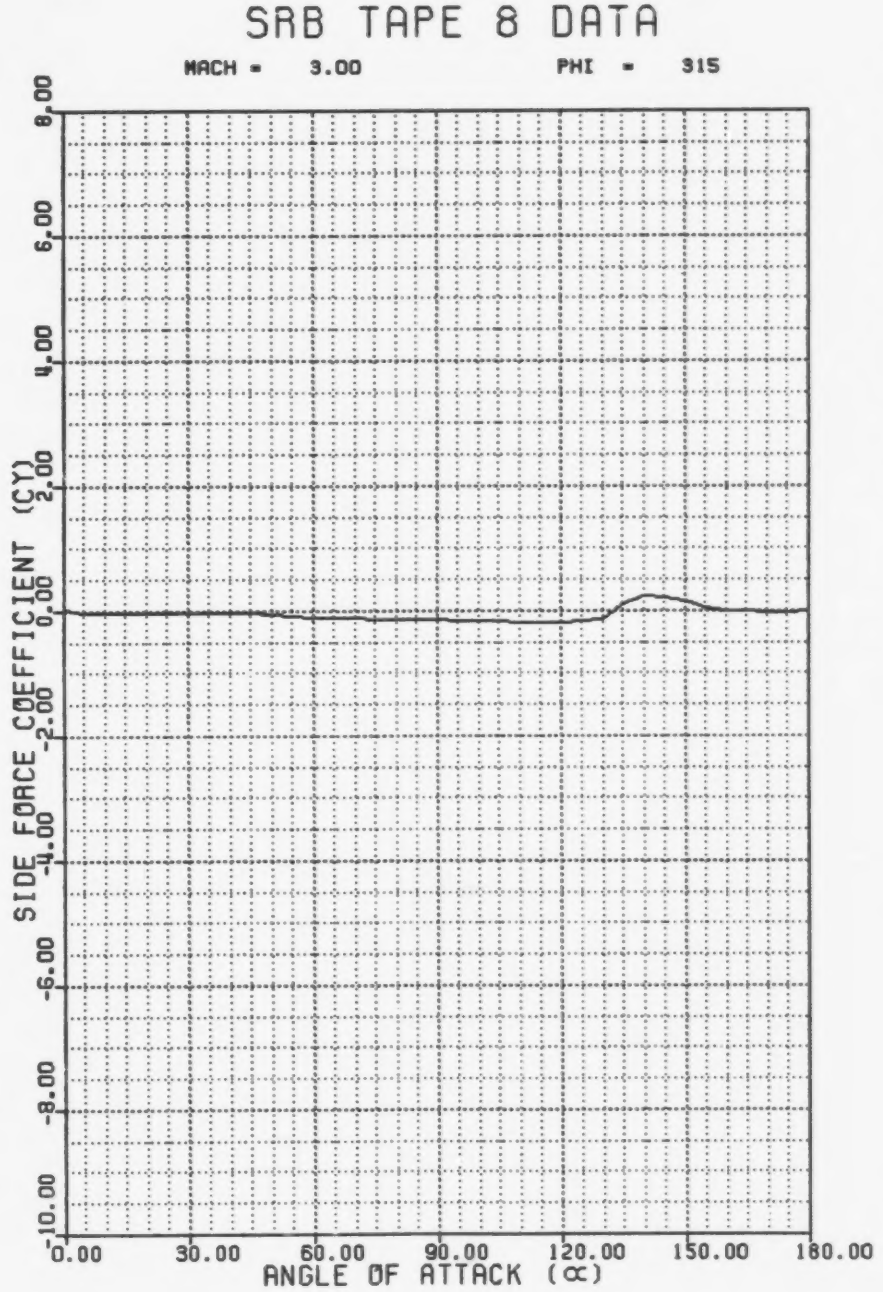
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 315
SIDE FORCE COEFFICIENT (CY)
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4.00
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0.00
-2.00
-4.00
-6.00
-8.00
-10.00
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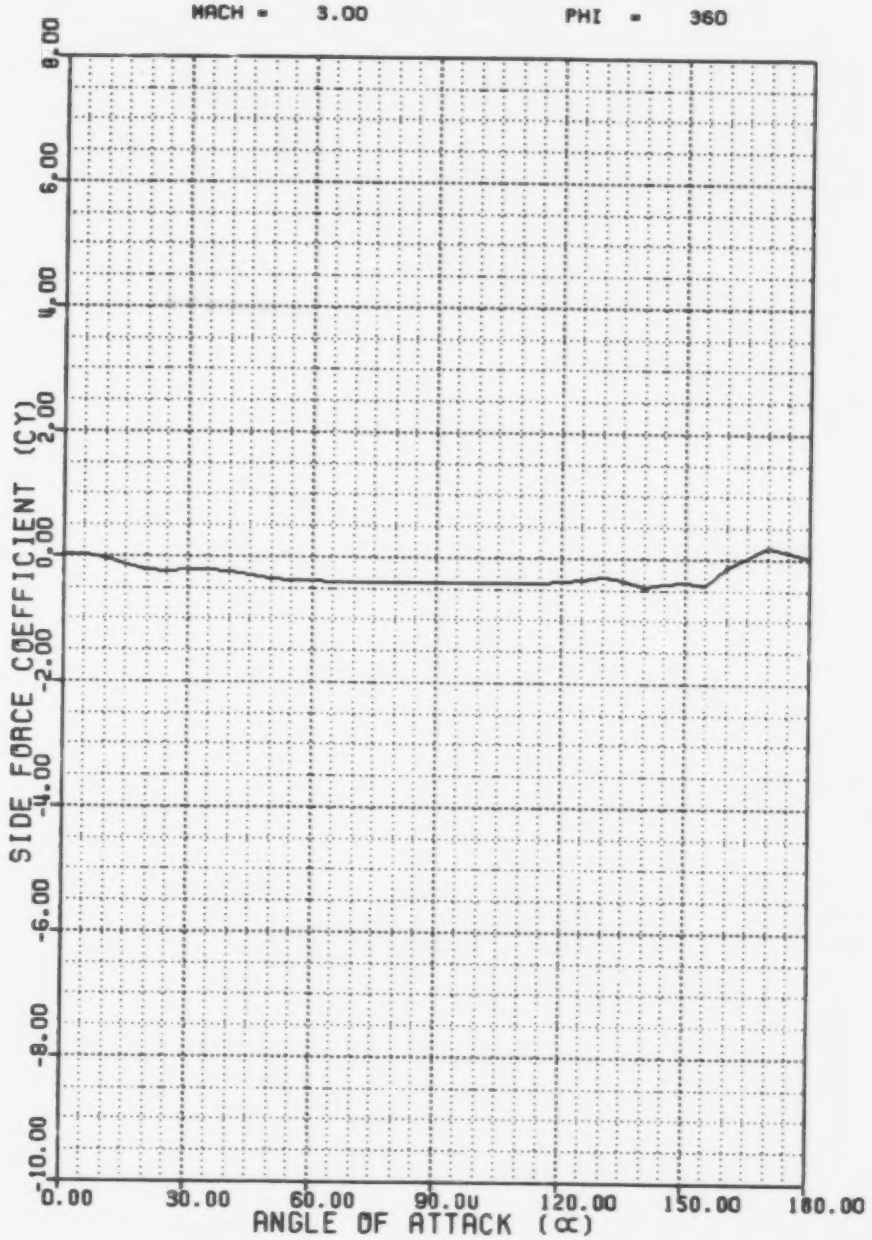
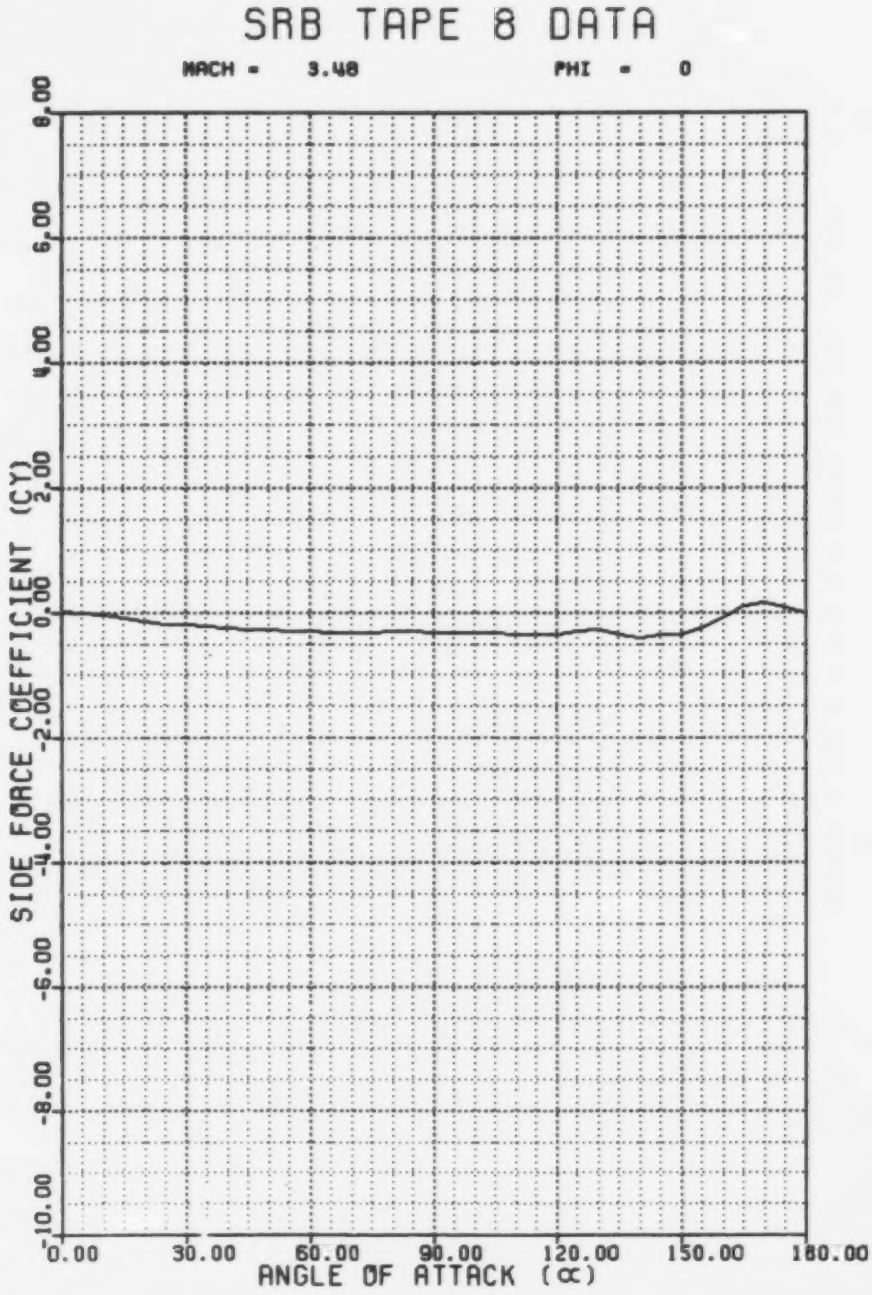
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

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SIDE FORCE COEFFICIENT (CY)
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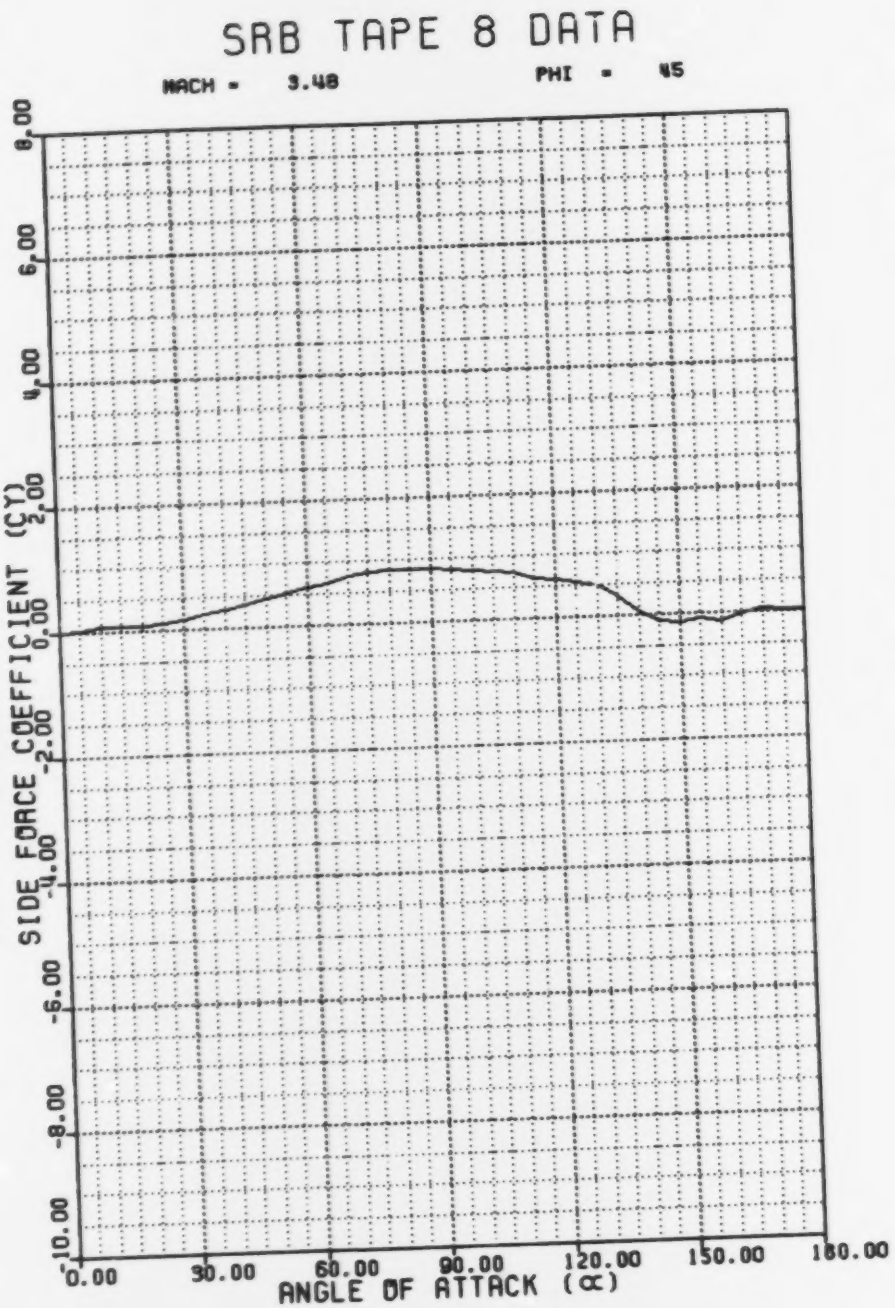
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
-4.00
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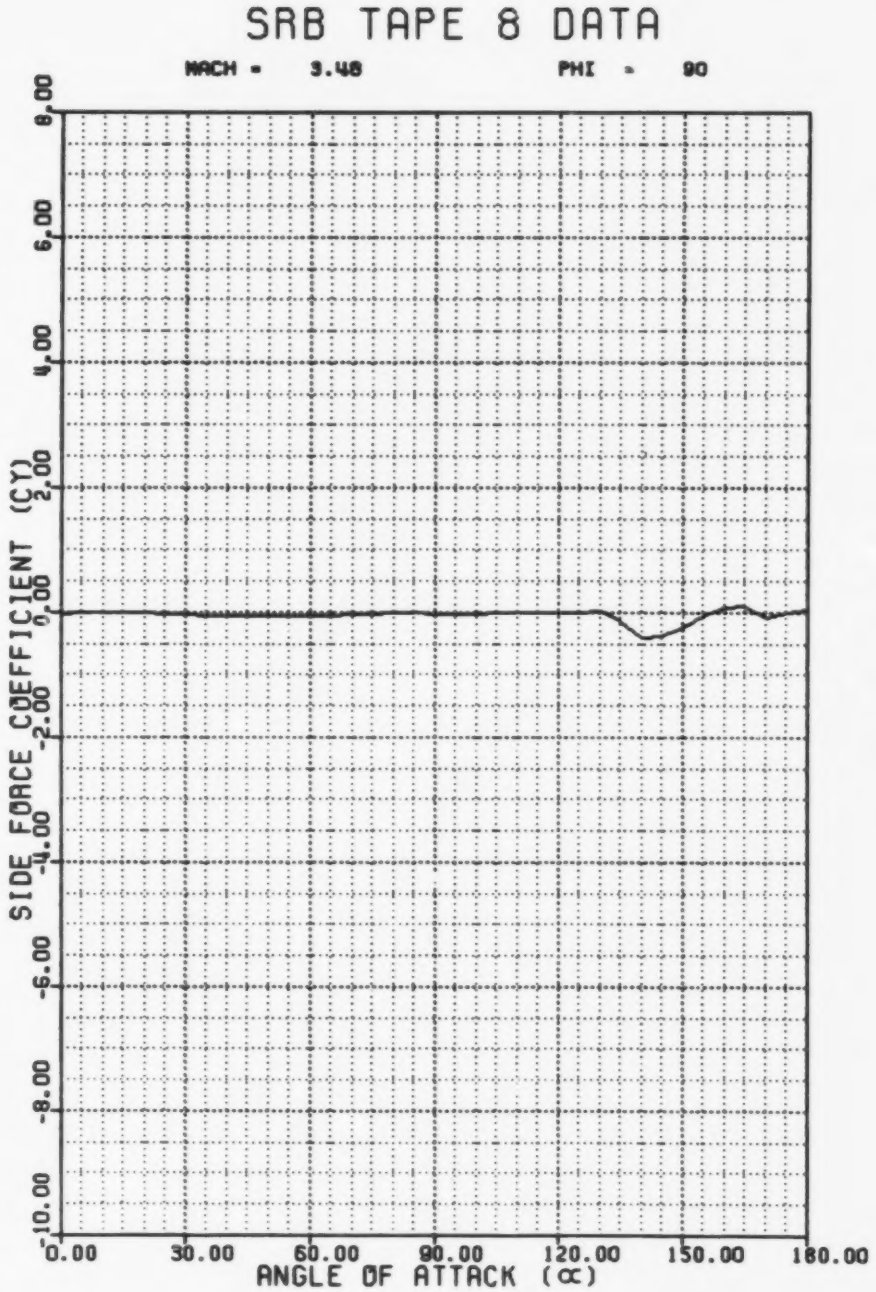
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 90
SIDE FORCE COEFFICIENT (CY)
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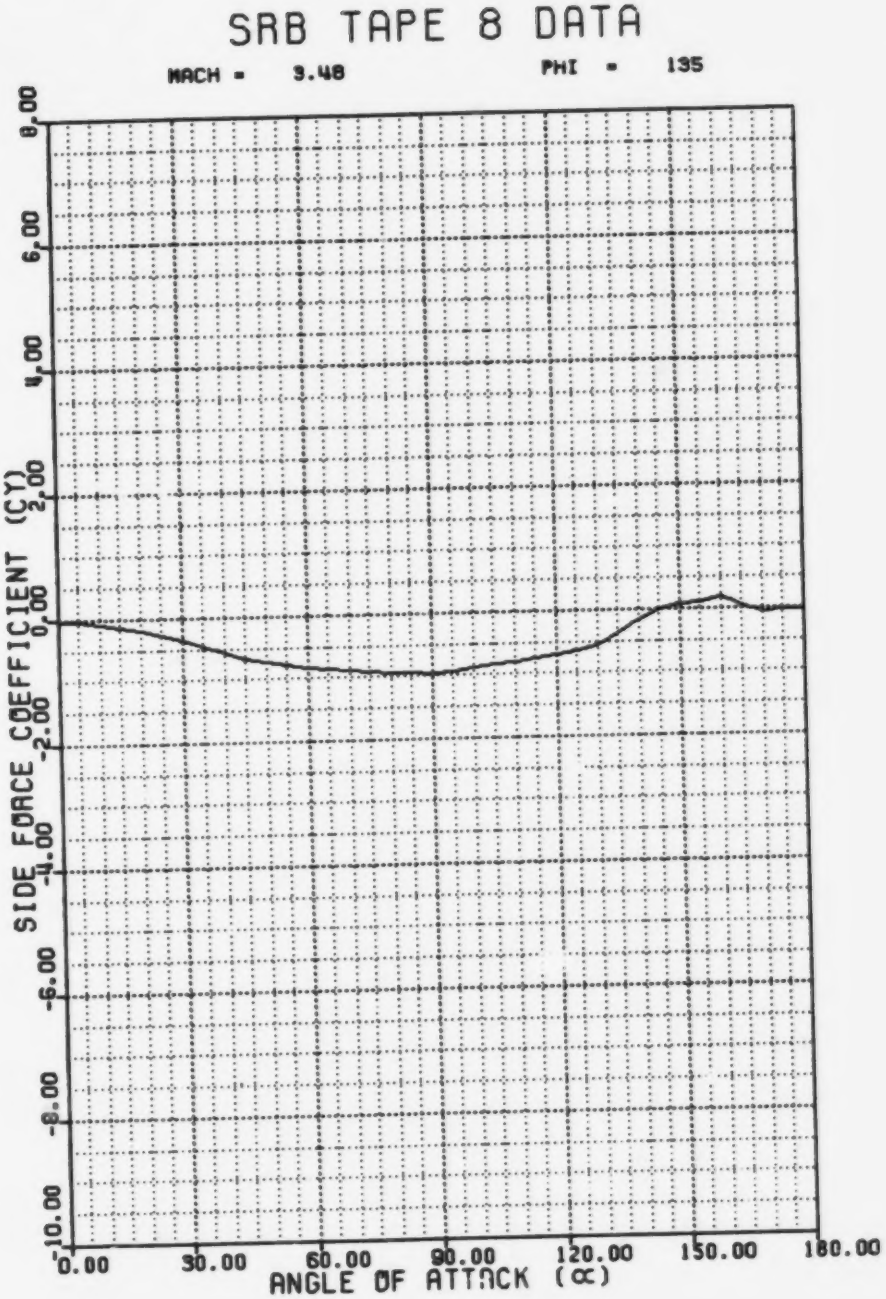
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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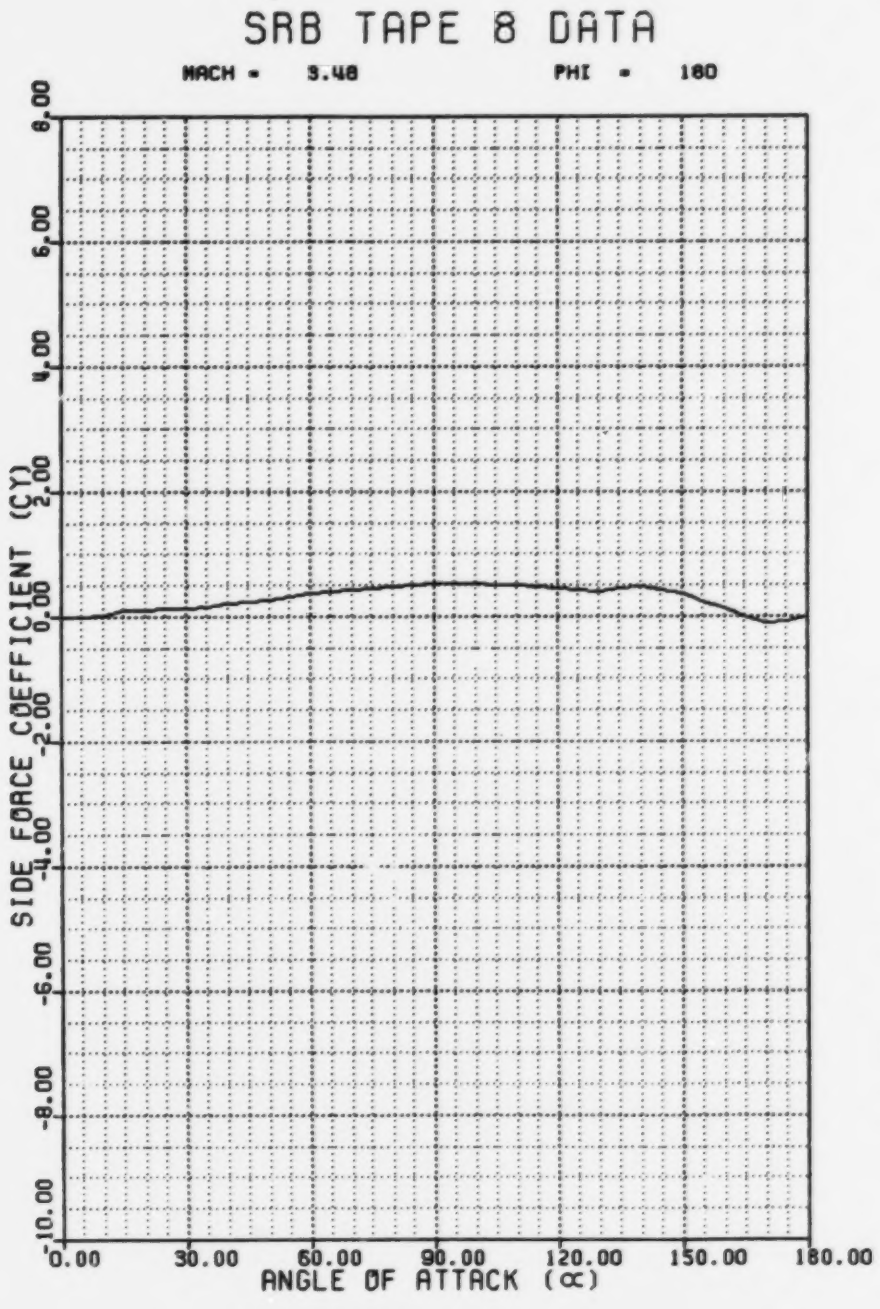
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 180
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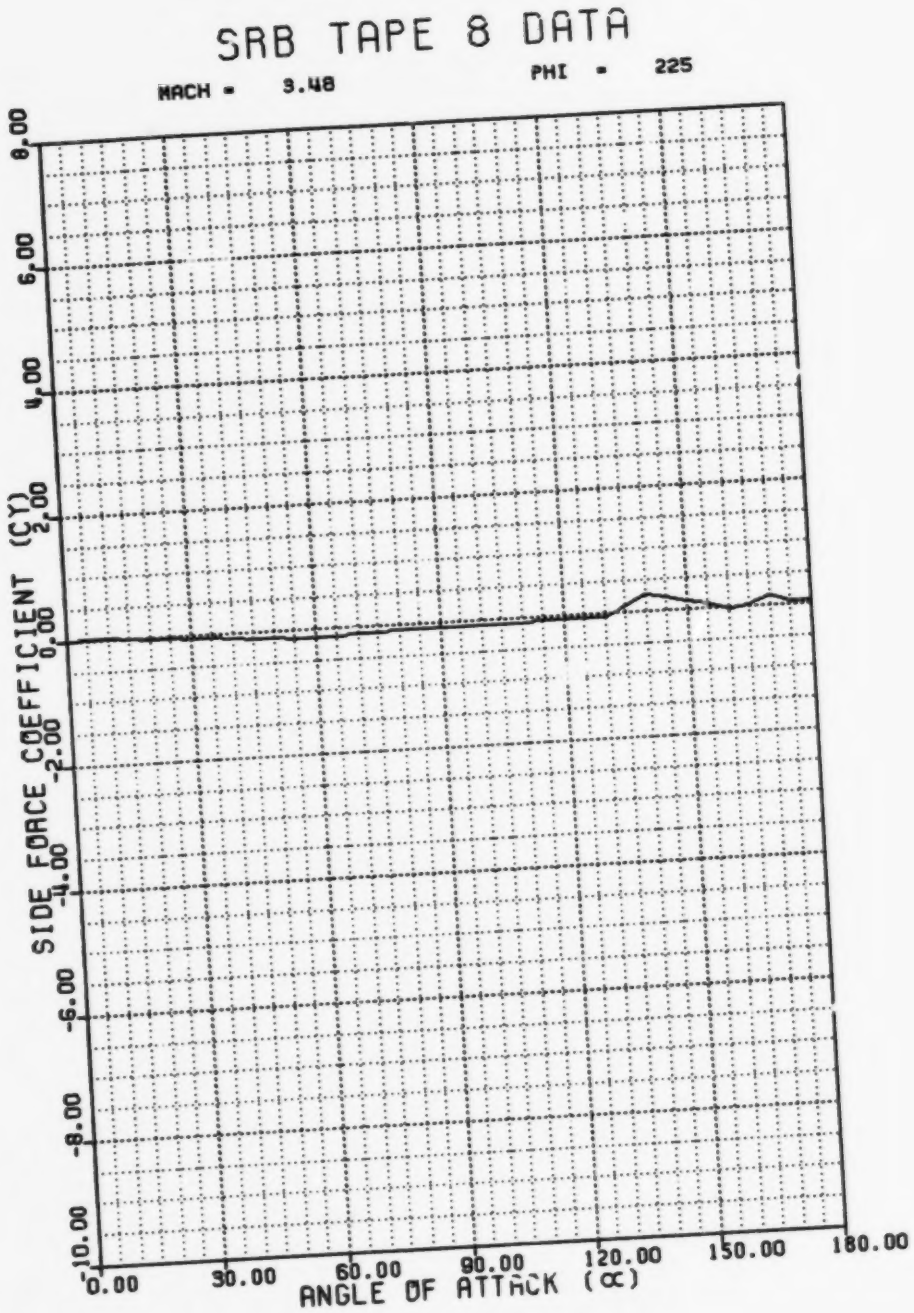
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 225
SIDE FORCE COEFFICIENT (CY)
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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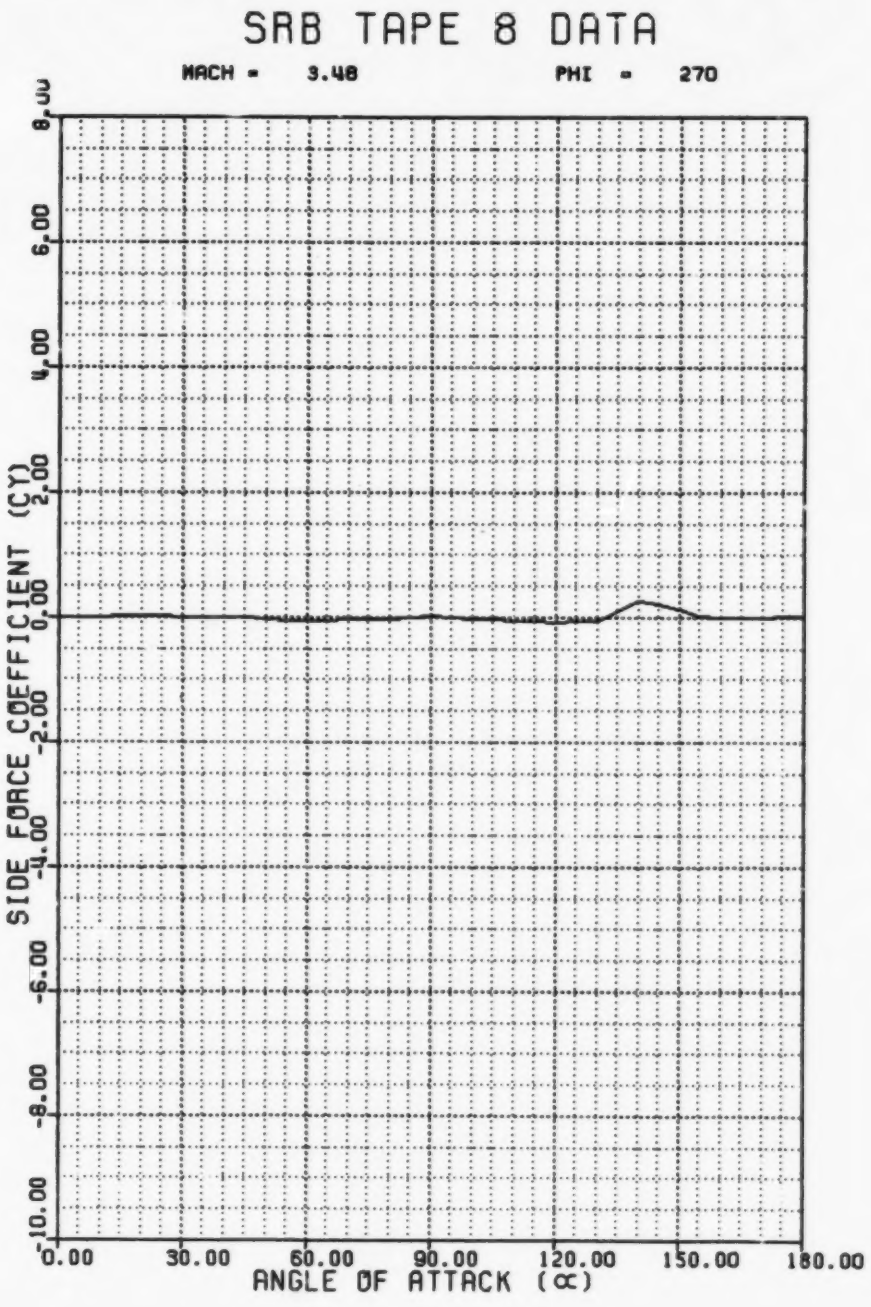
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 270
SIDE FORCE COEFFICIENT (CY)
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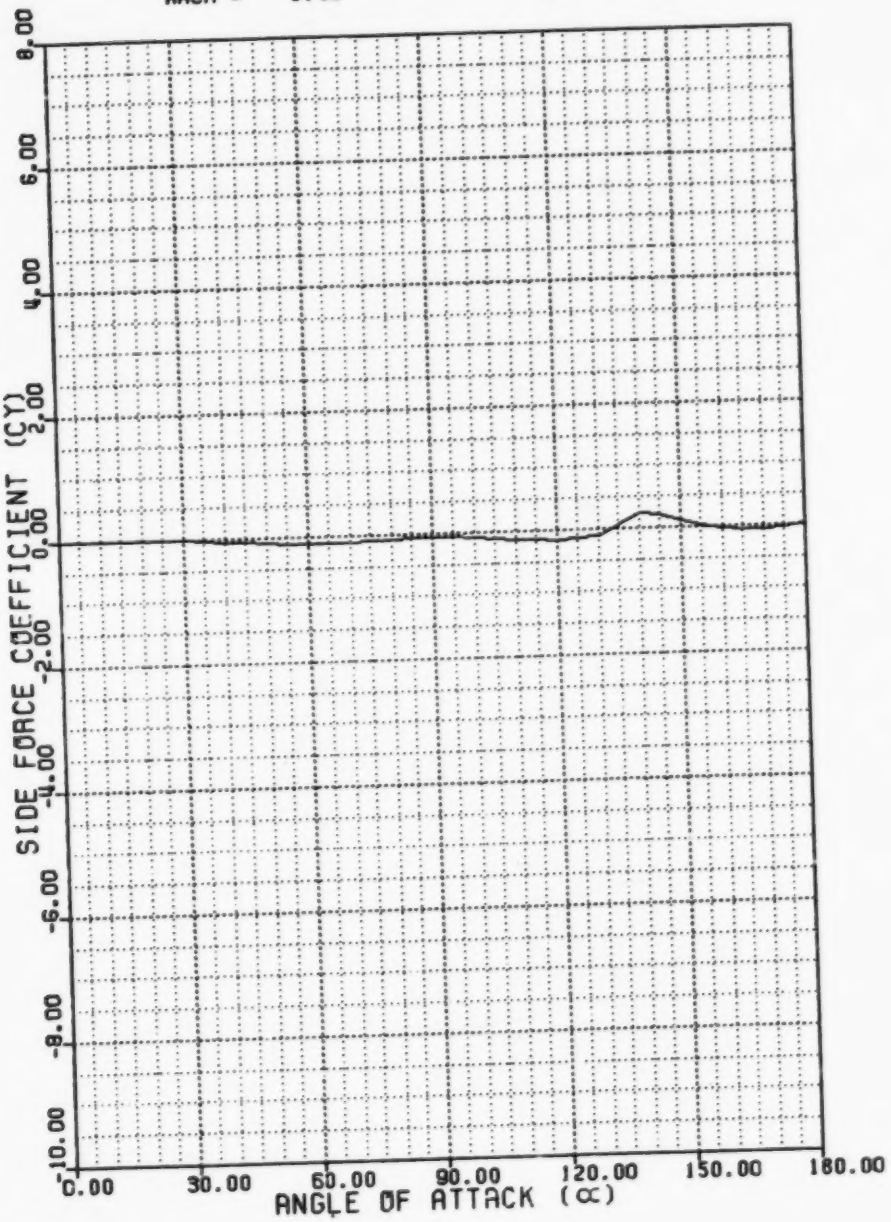
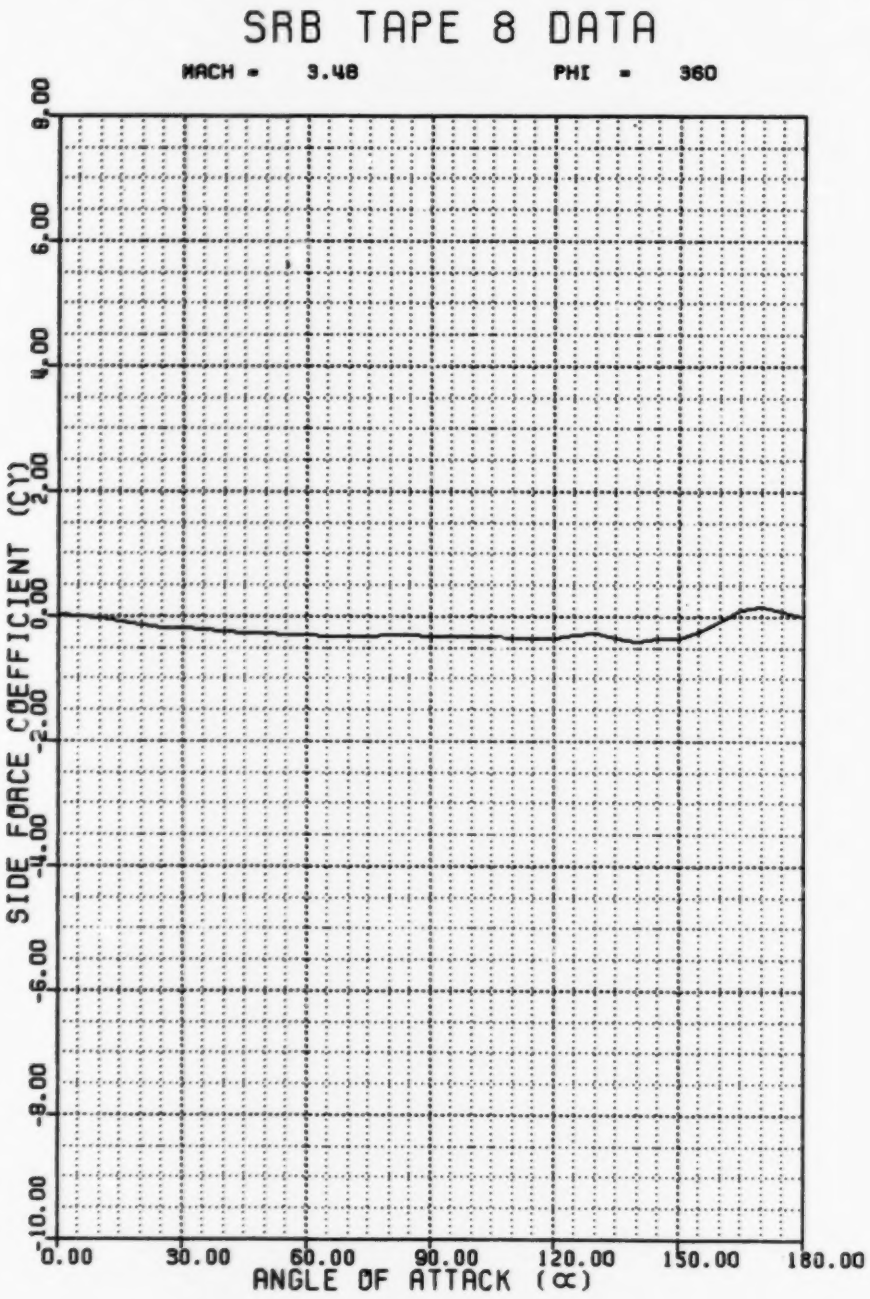
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 3.48 PHI = 315




SRB TAPE 8 DATA
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PHI = 360
SIDE FORCE COEFFICIENT (CY)
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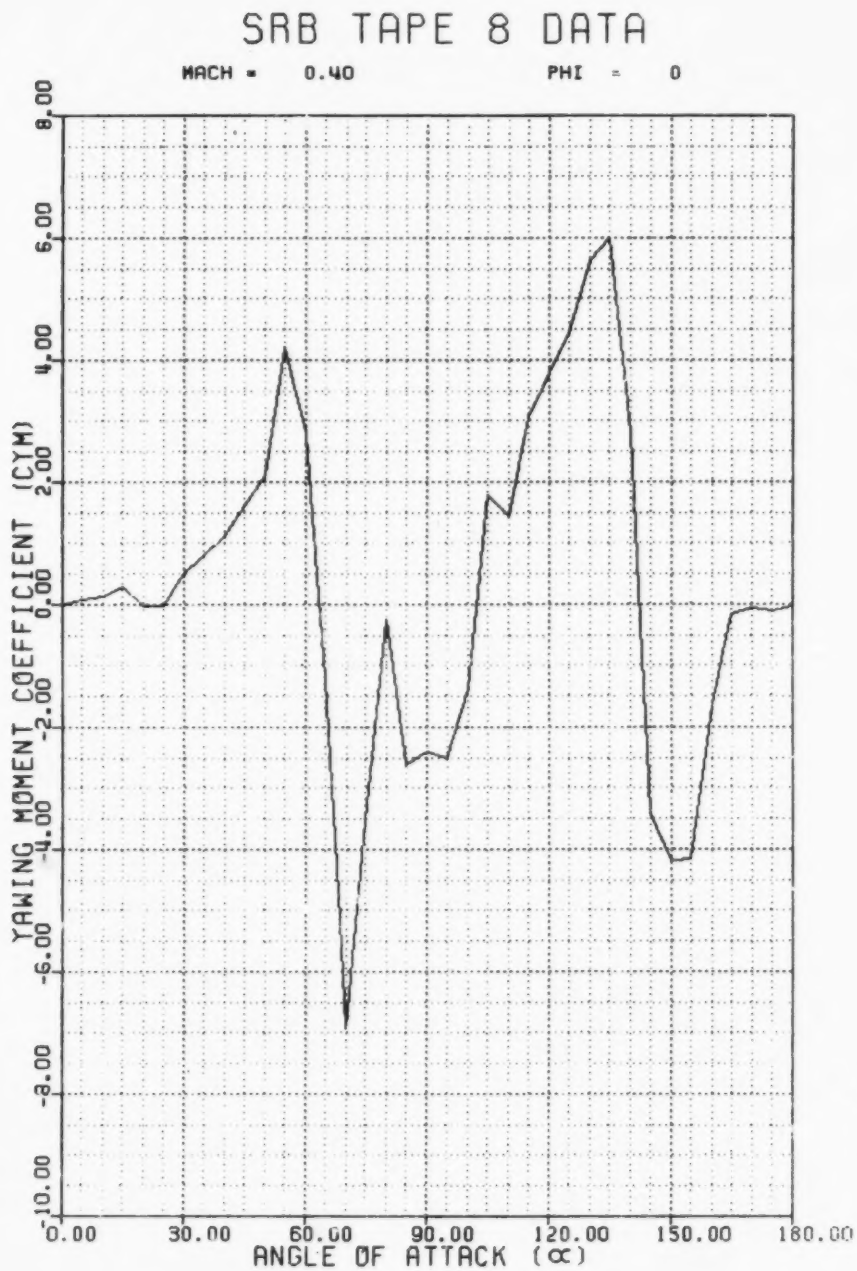
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

YAWING MOMENT (CYM)

Mach Number	Page
0.4	B-433
0.5	B-442
0.55	B-451
0.6	B-460
0.7	B-469
0.8	B-478
0.9	B-487
0.95	B-496
1.05	B-505
1.1	B-514
1.2	B-523
1.4	B-532
1.96	B-541
2.5	B-550
3.0	B-559
3.48	B-568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4.00
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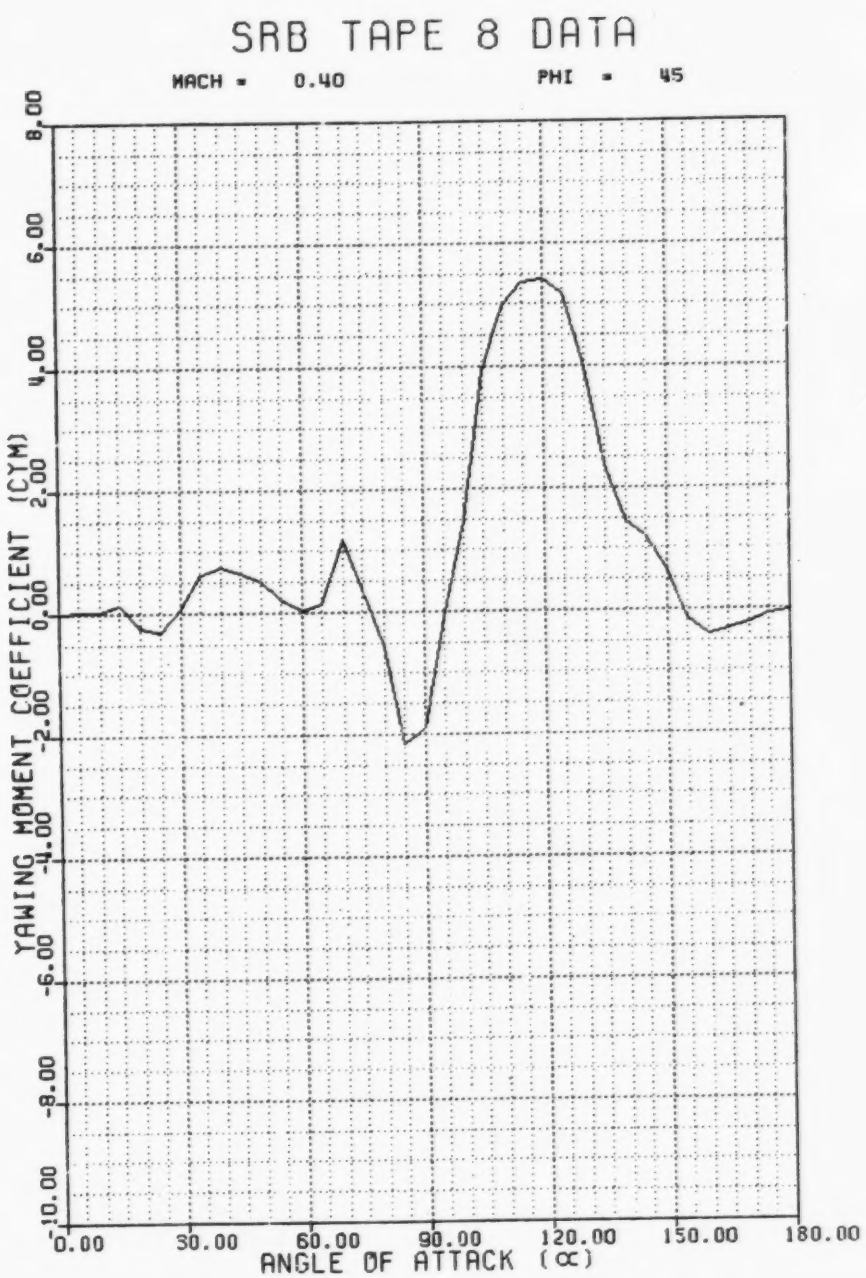
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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4.00
2.00
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-2.00
-4.00
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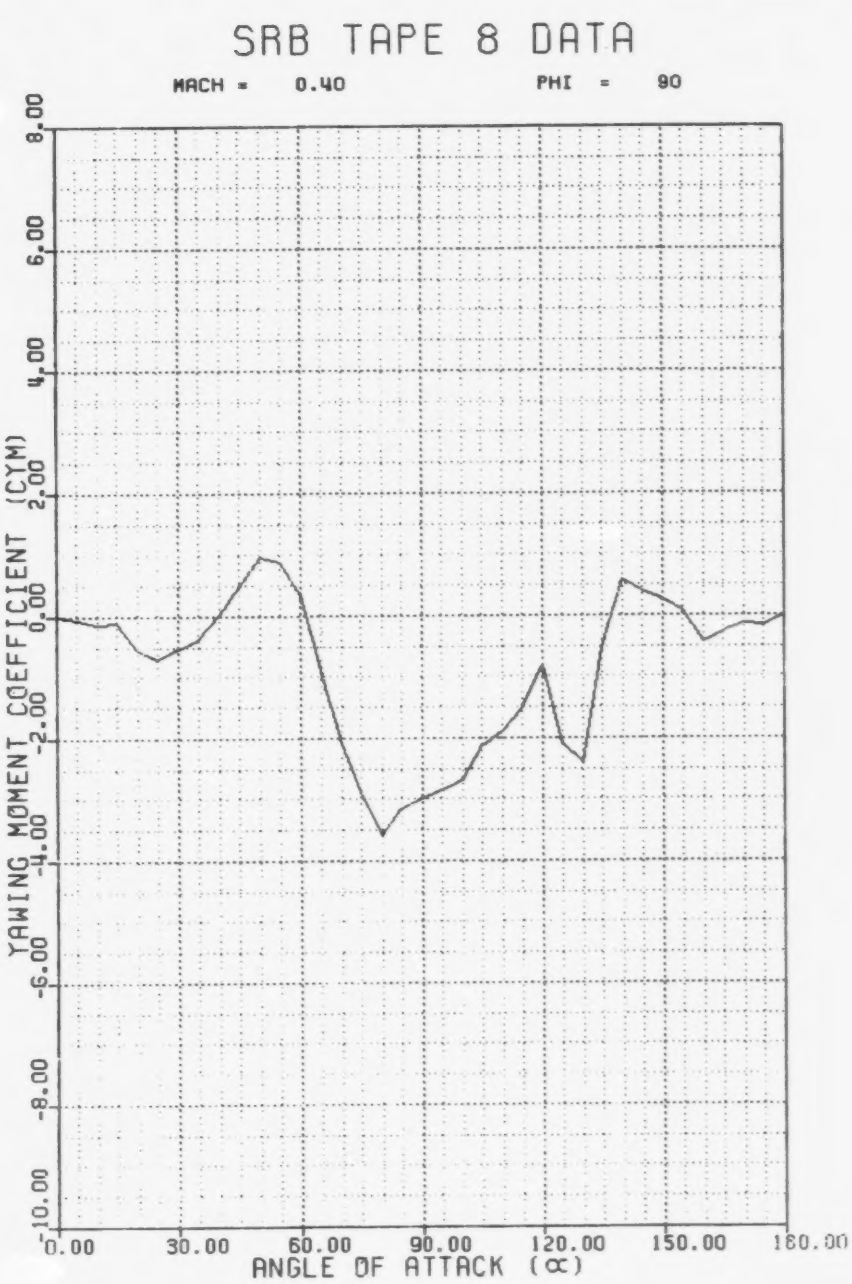
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-4.00
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-8.00
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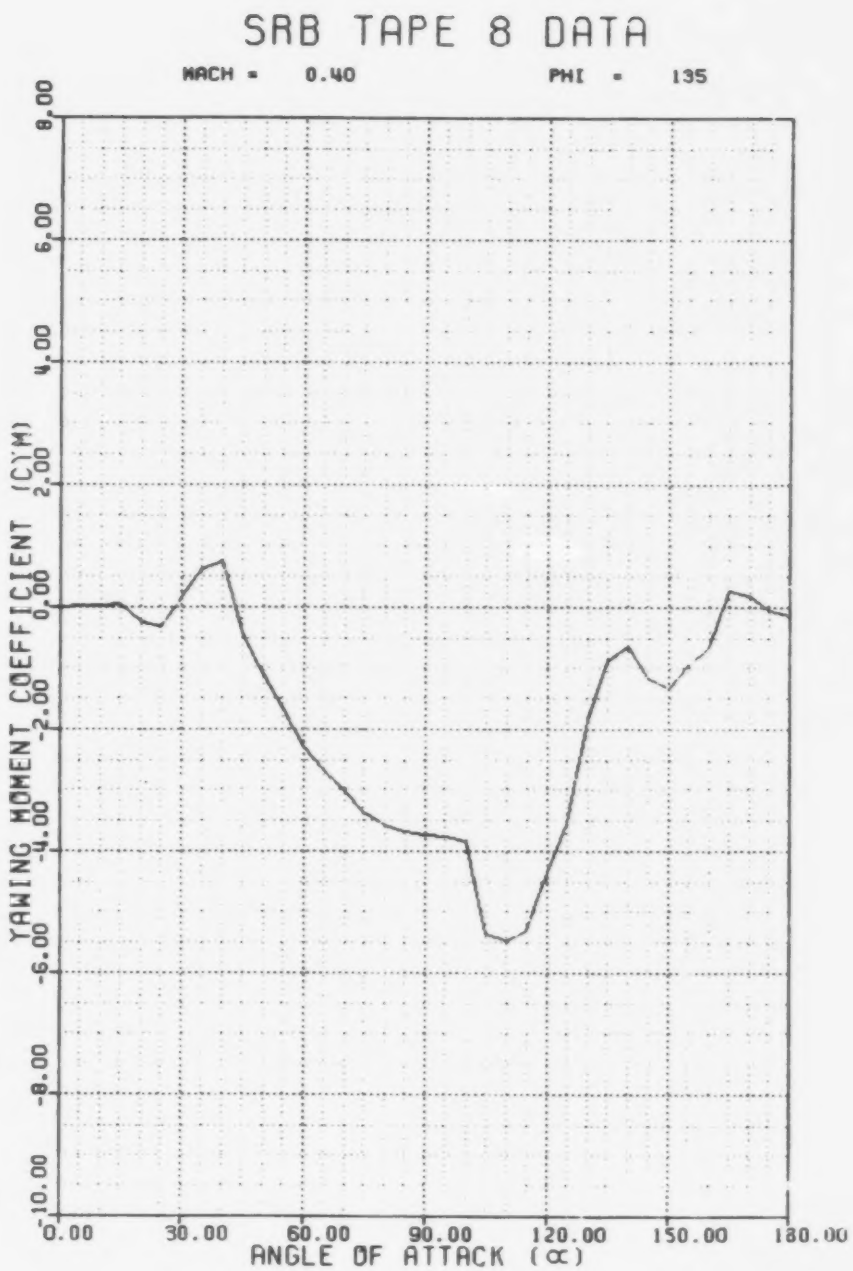
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
PHI = 135
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4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
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0.00
30.00
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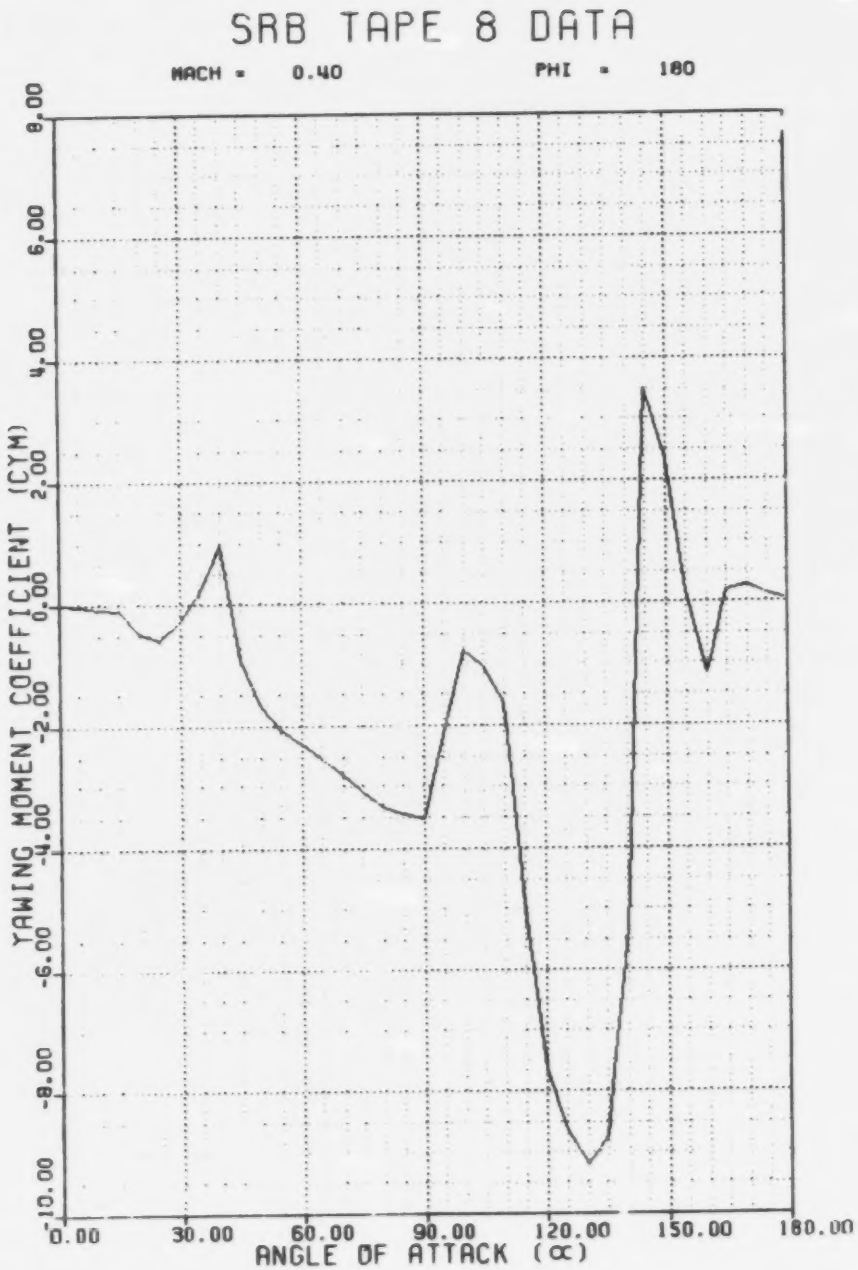
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
-4.00
-6.00
-8.00
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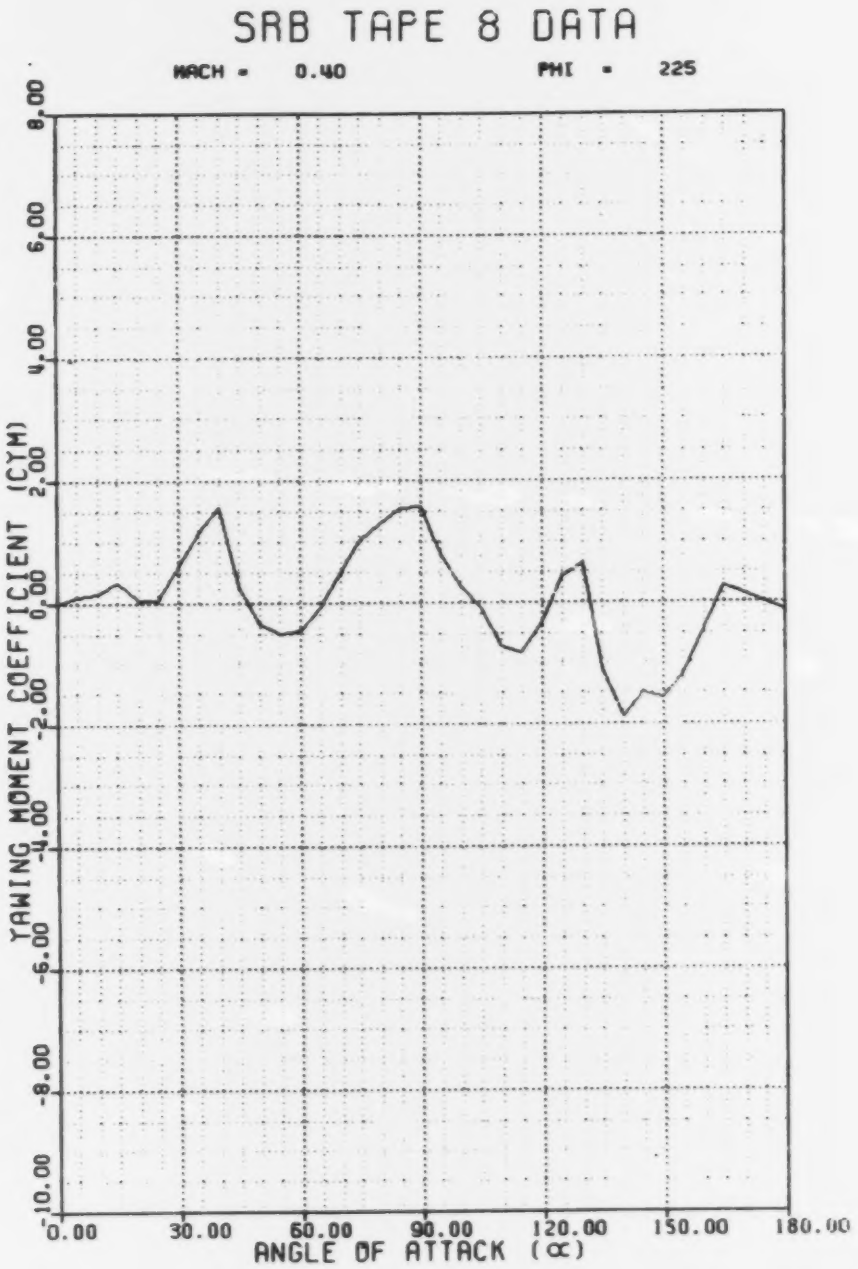
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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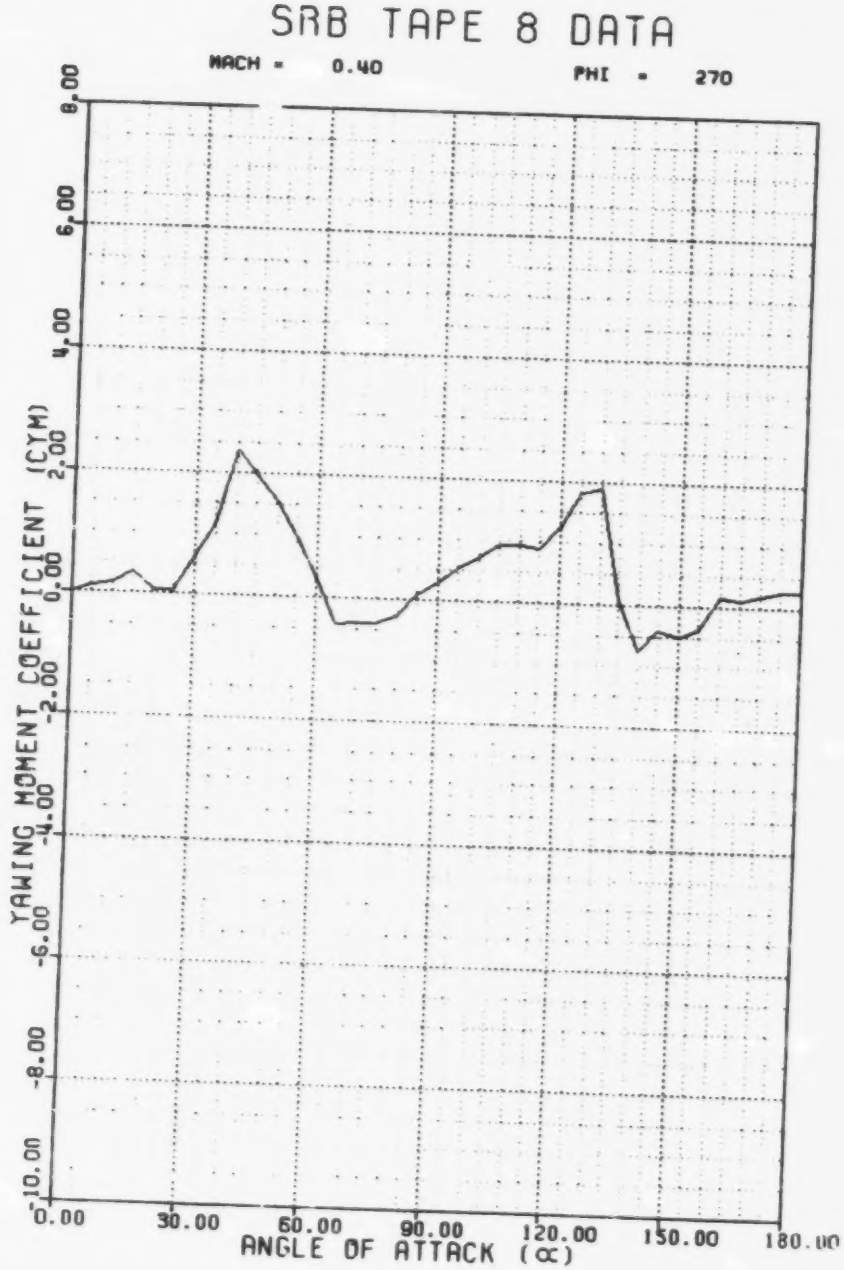
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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2.00
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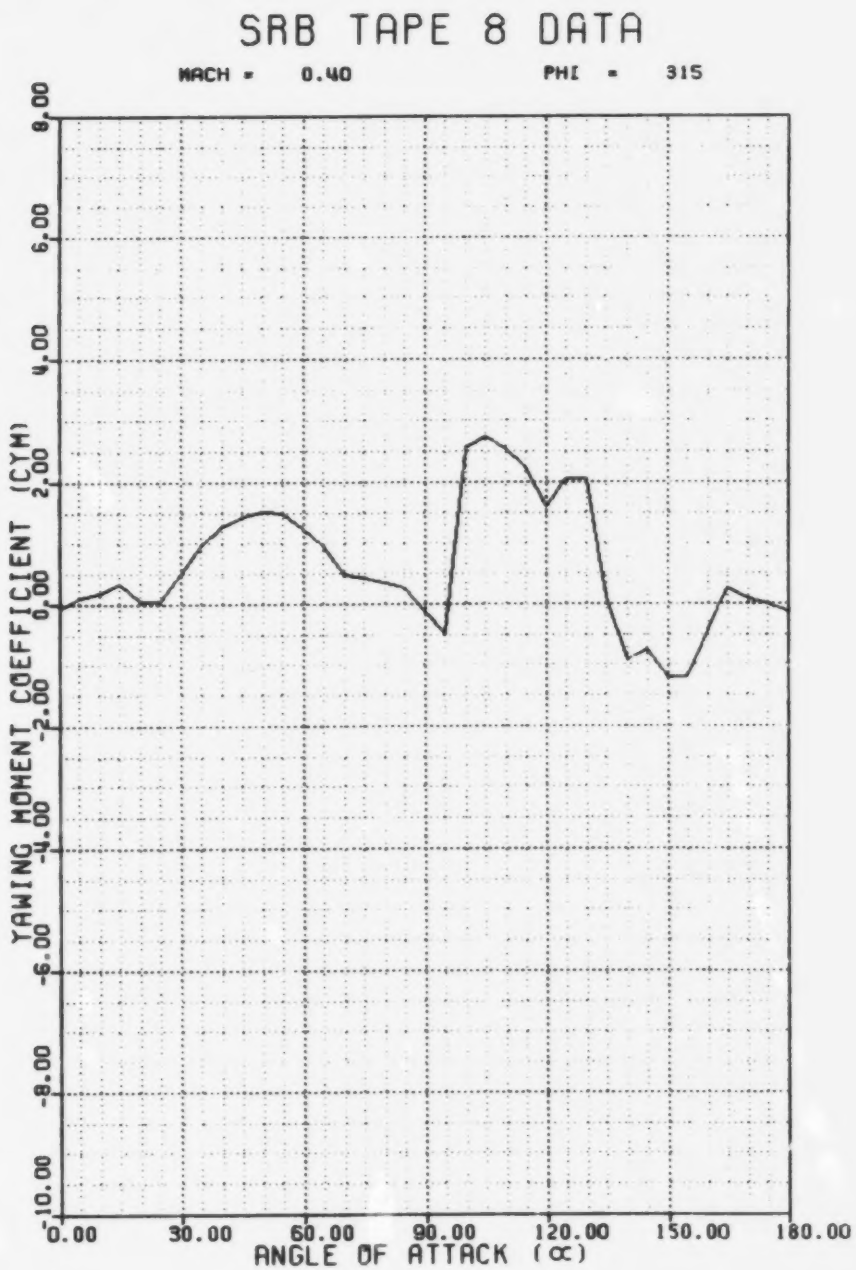
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
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-4.00
-6.00
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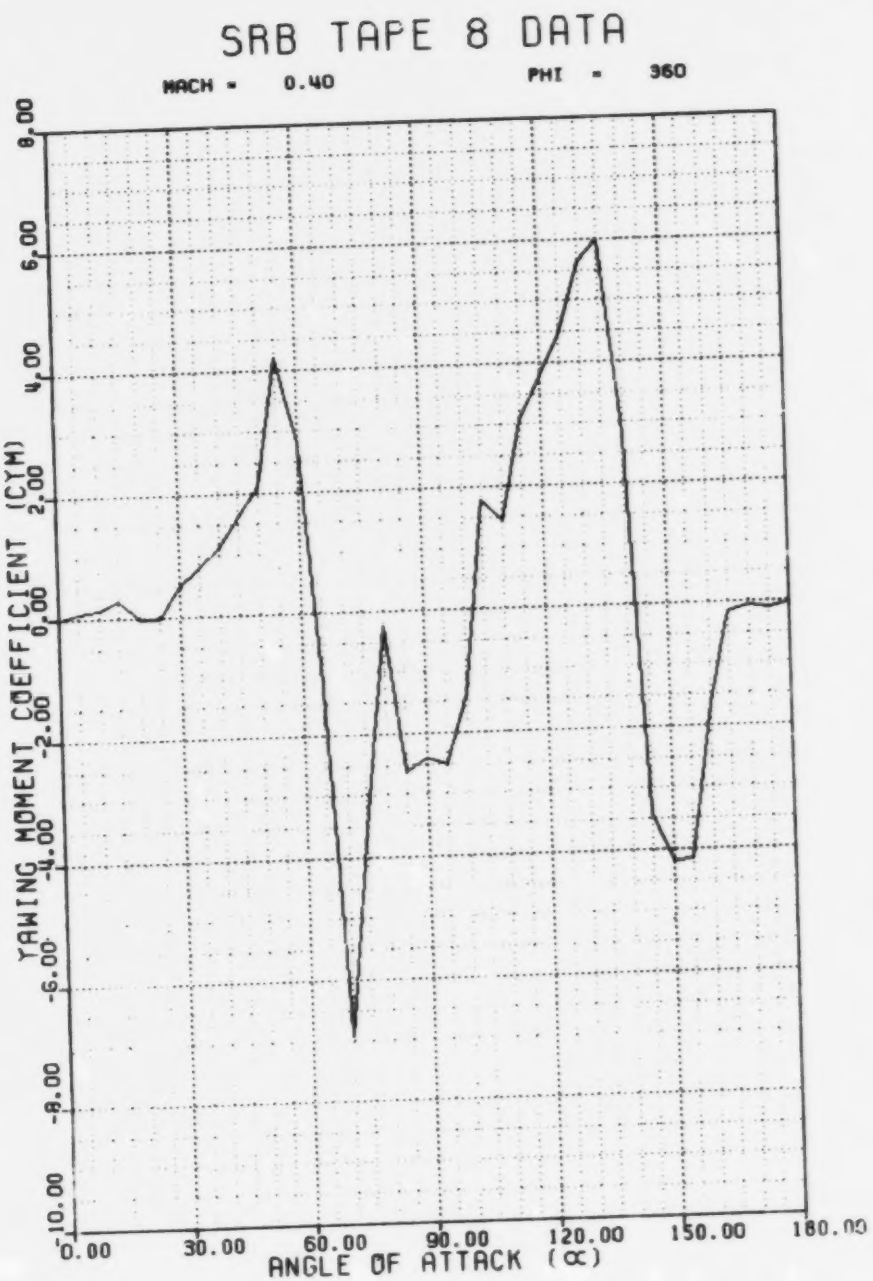
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
PHI = 360
YAWING MOMENT COEFFICIENT (CYM)
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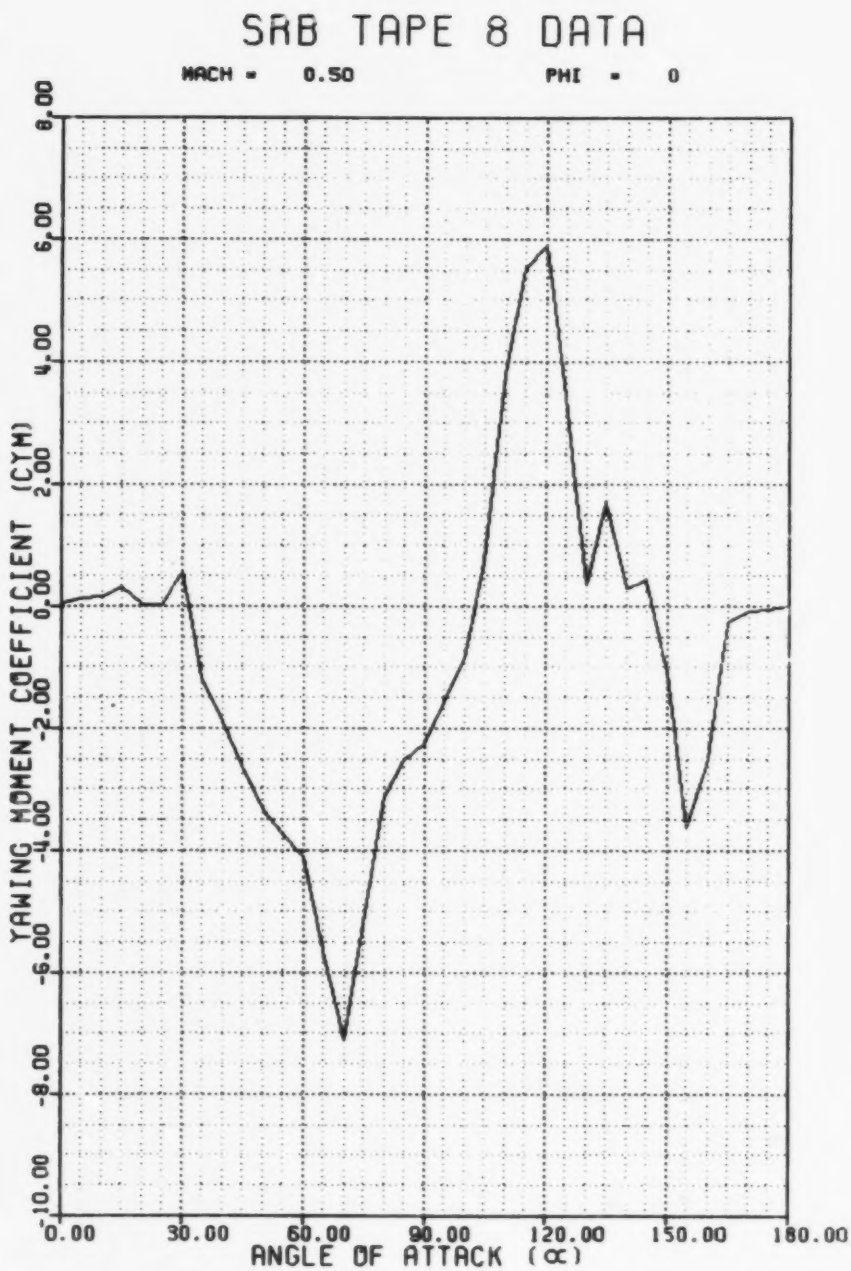
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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YAWING MOMENT COEFFICIENT (CYM)
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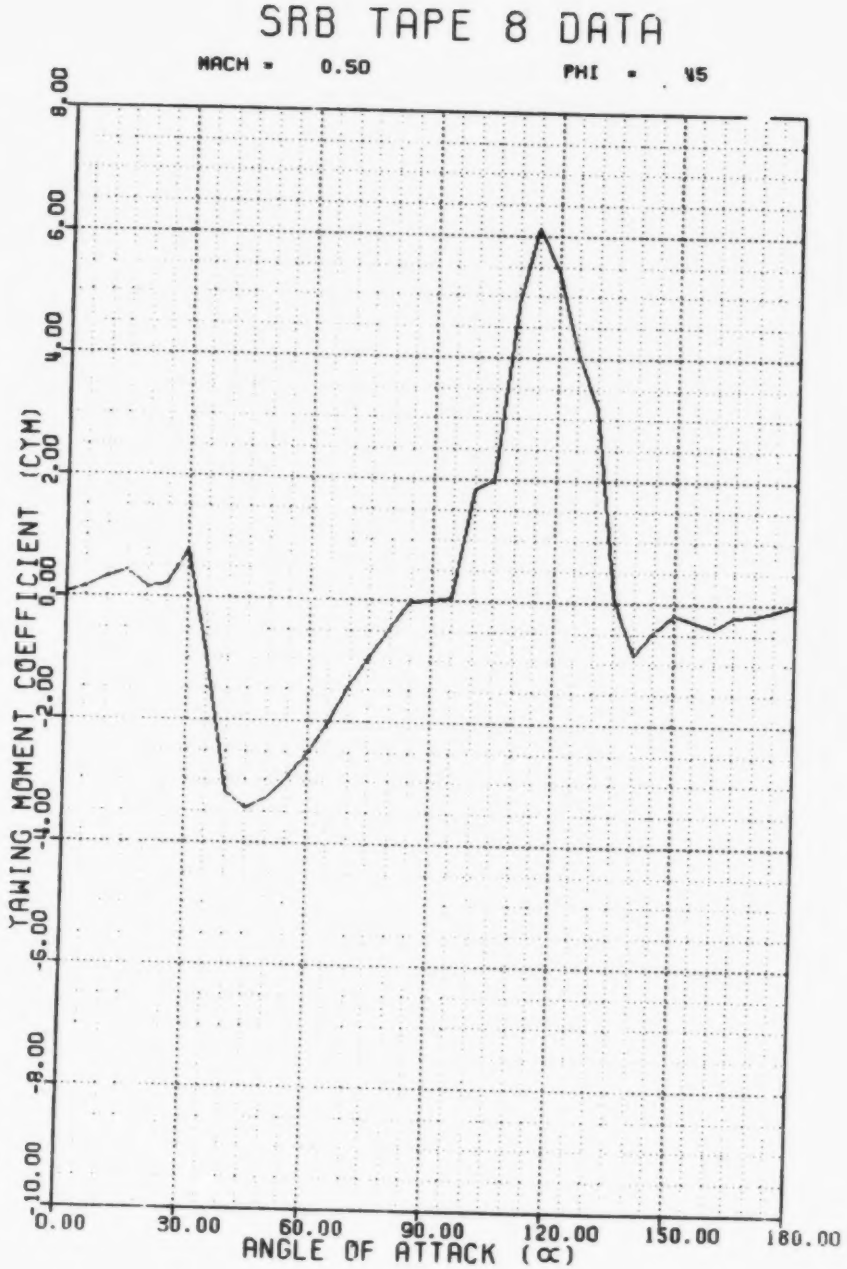
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 45
YAWING MOMENT COEFFICIENT (CYM)
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-2.00
-4.00
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120.00
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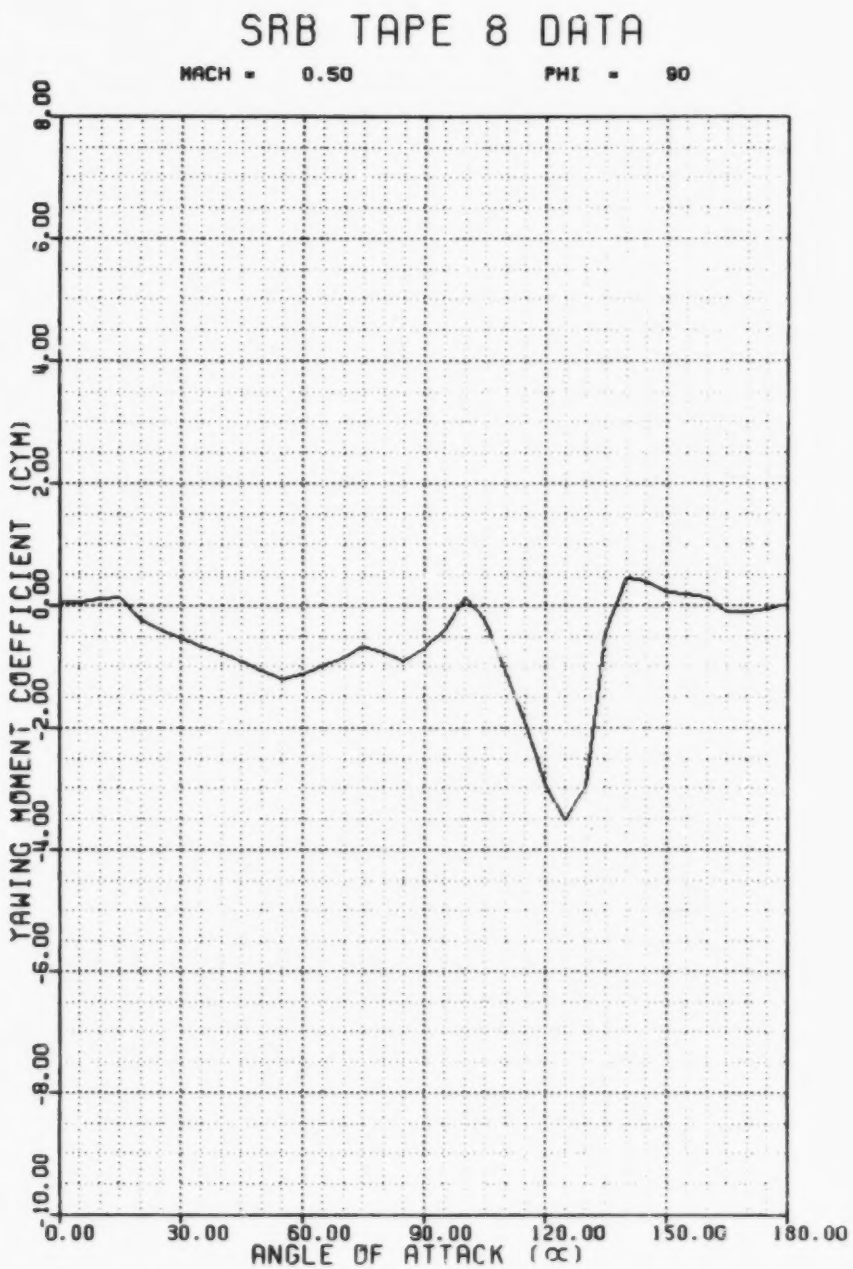
180.00
ANGLE OF ATTACK (α)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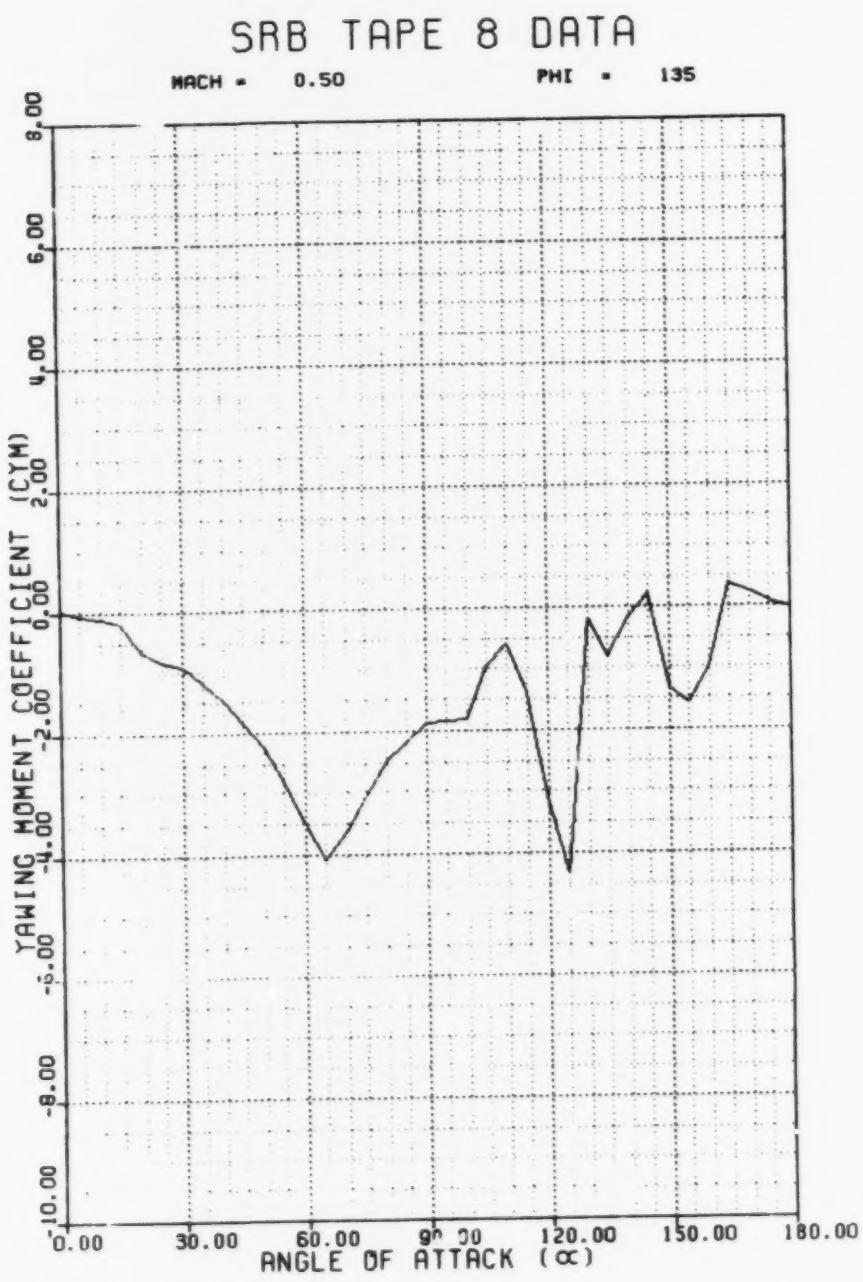
ANGLE OF ATTACK (α)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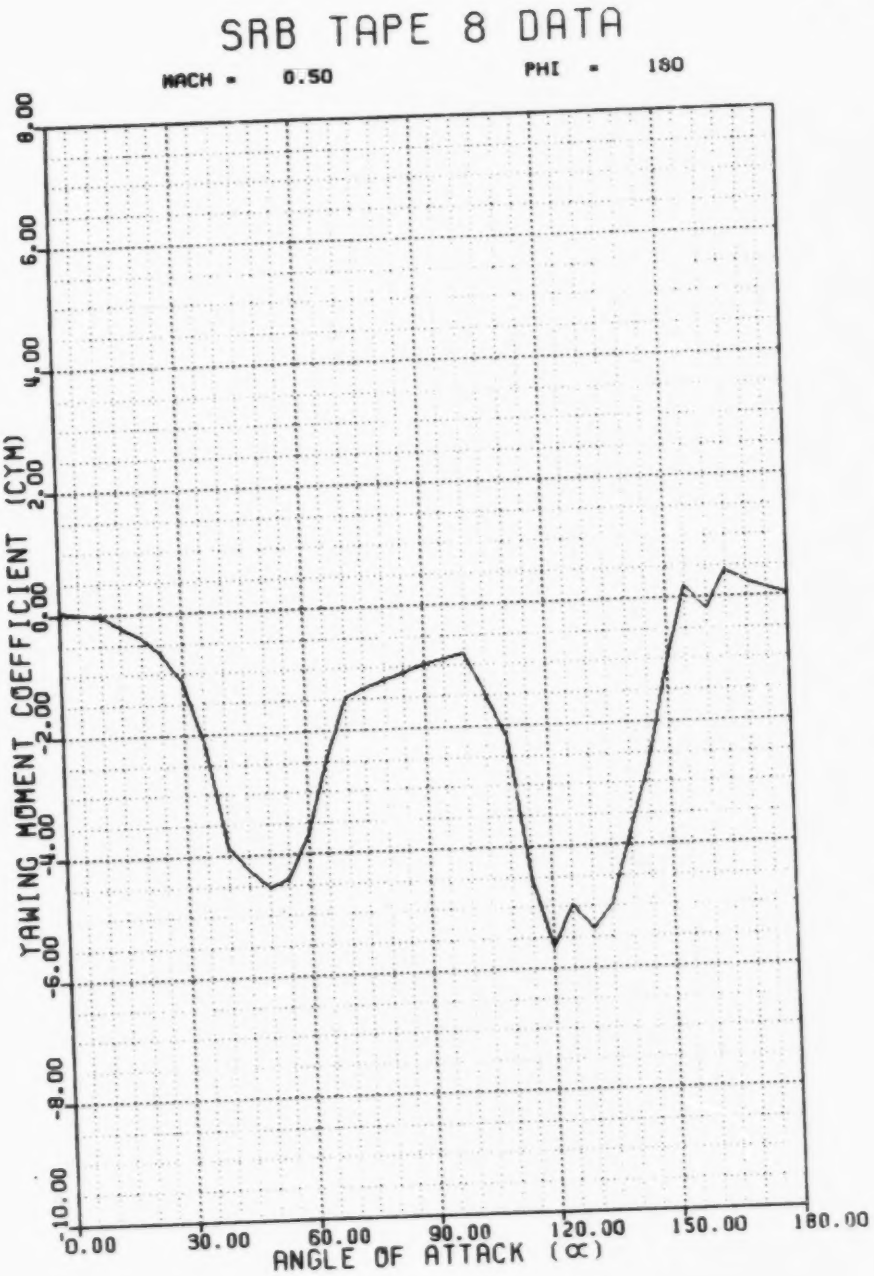
ANGLE OF ATTACK (α)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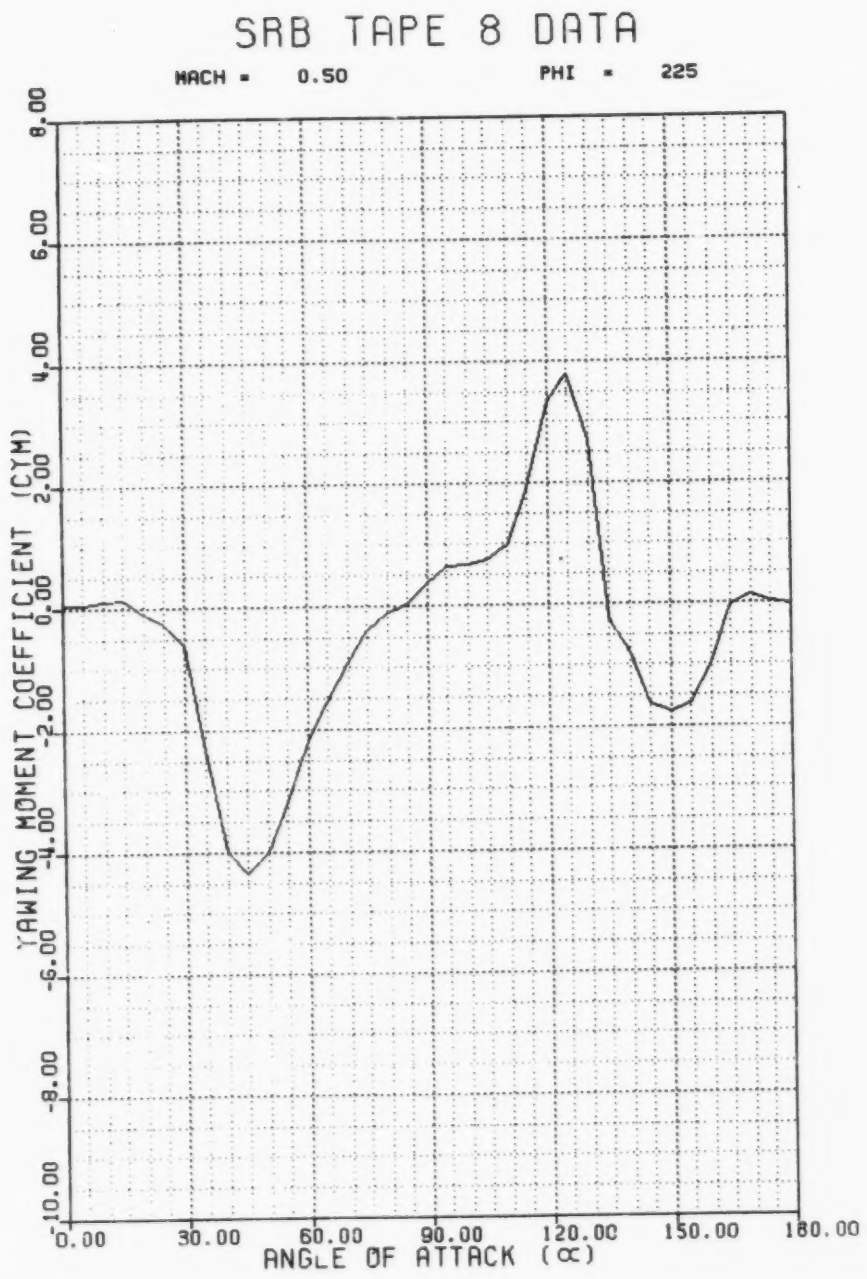
ANGLE OF ATTACK (α)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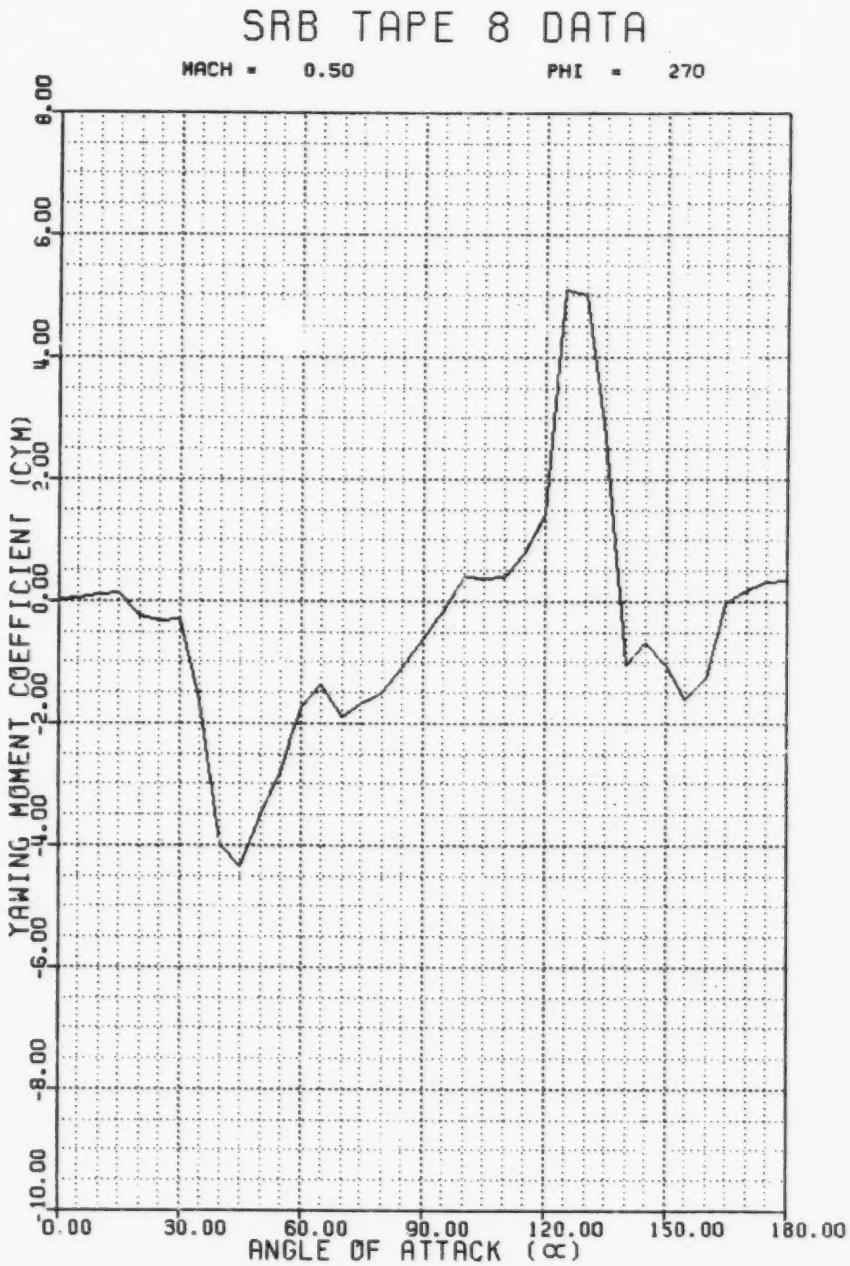
ANGLE OF ATTACK (α)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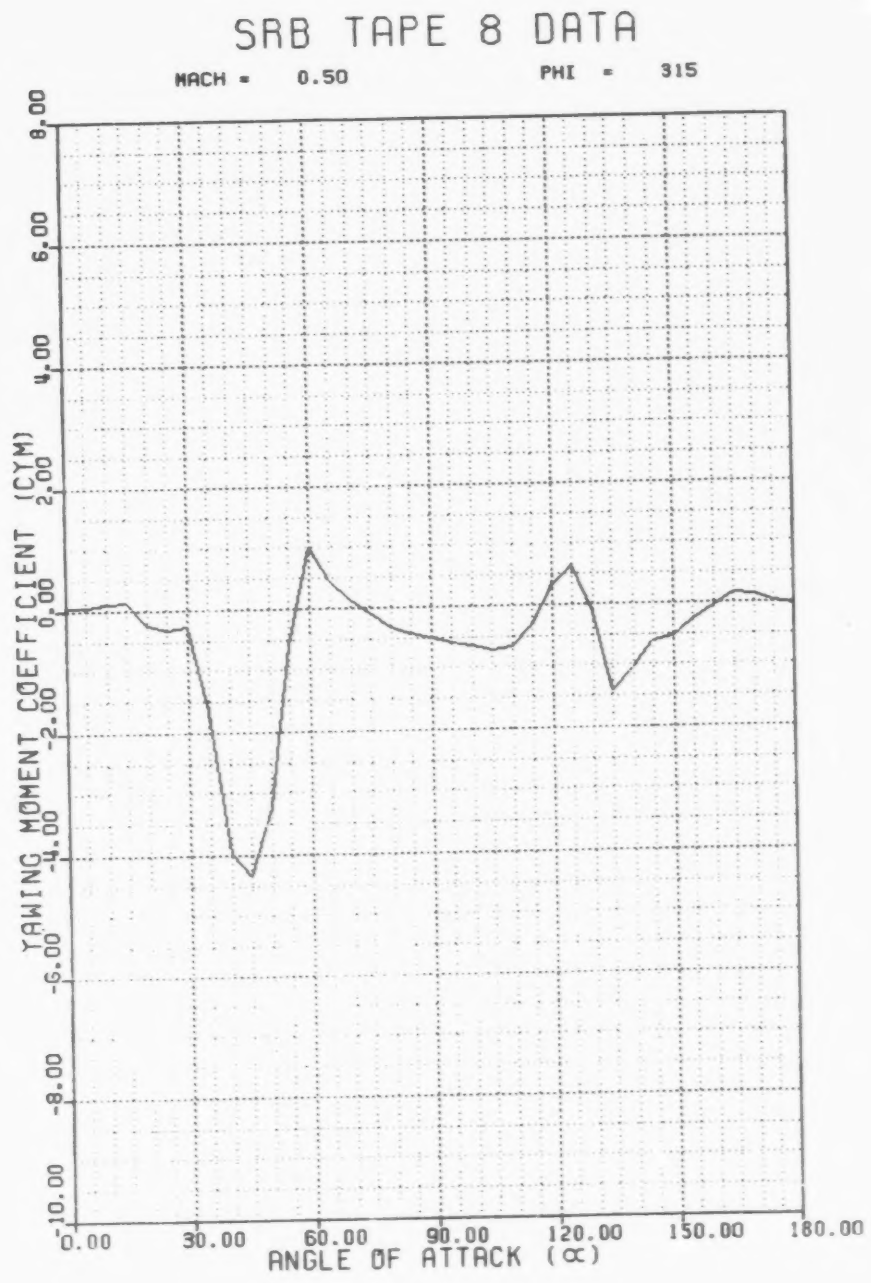
ANGLE OF ATTACK (α)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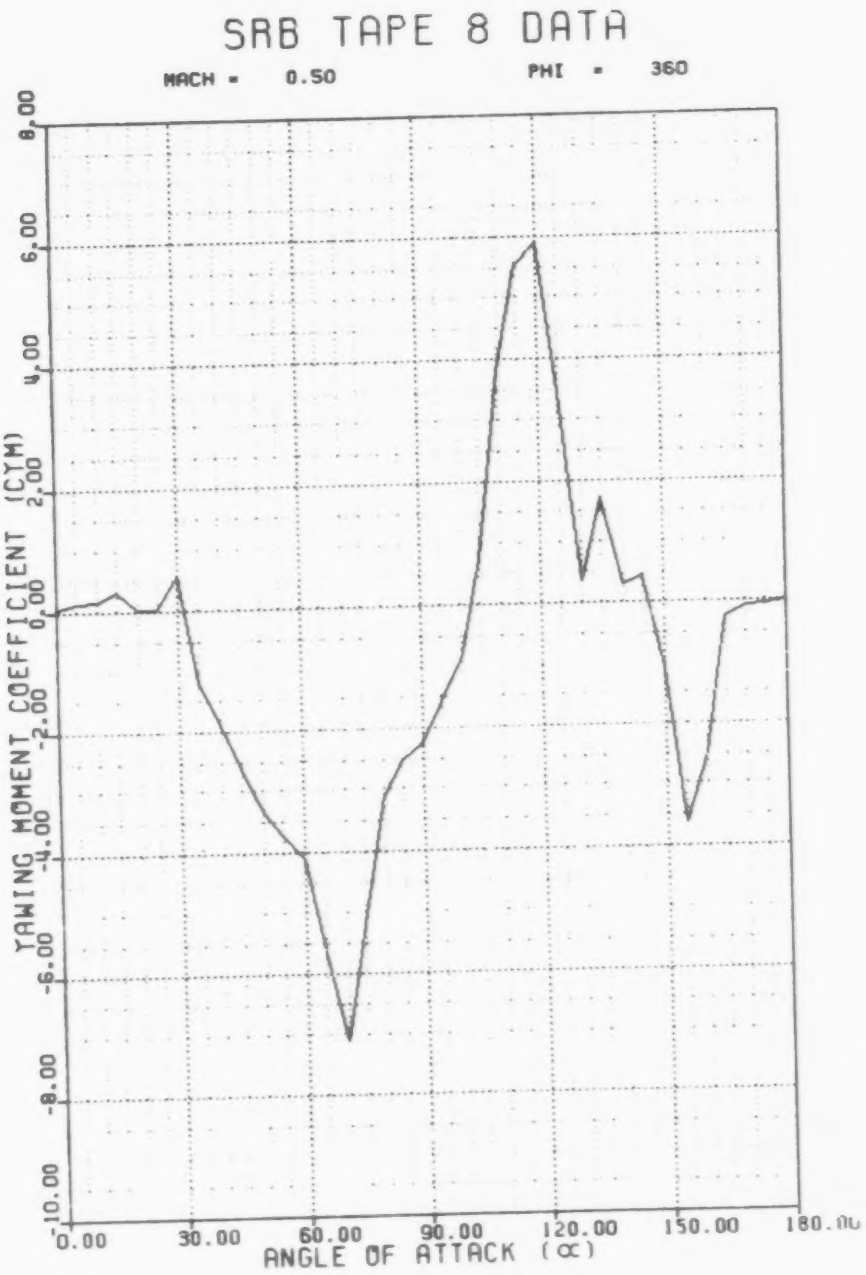
ANGLE OF ATTACK (α)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-2.00
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0.00
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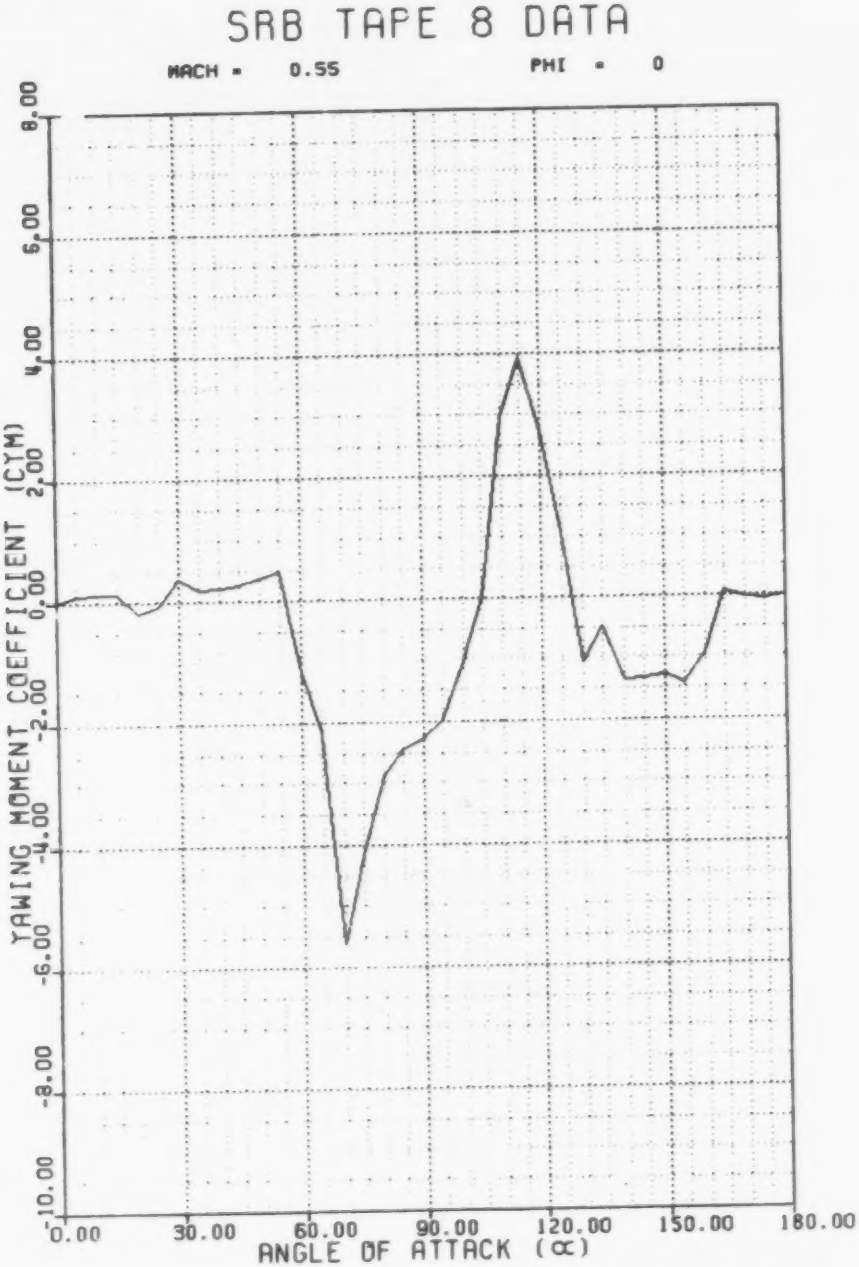
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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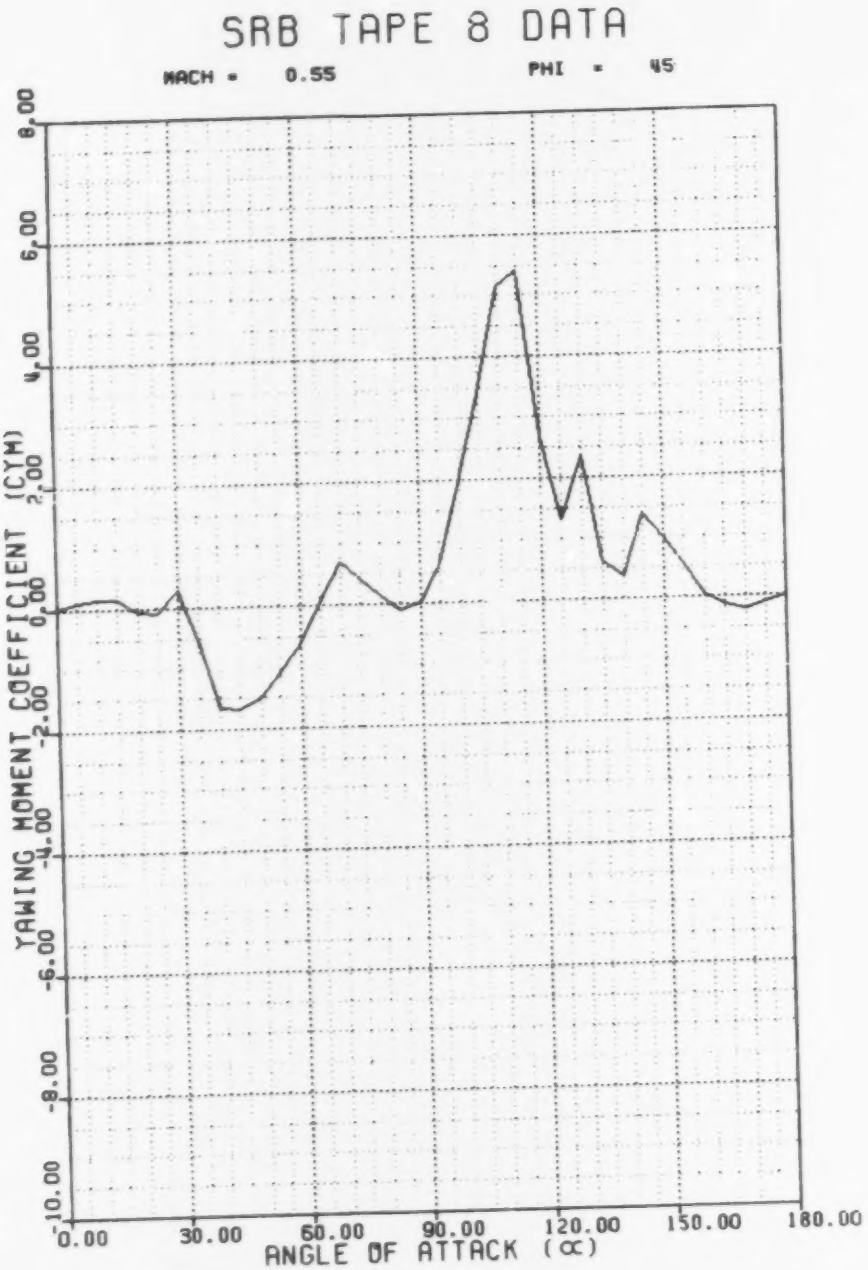
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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4.00
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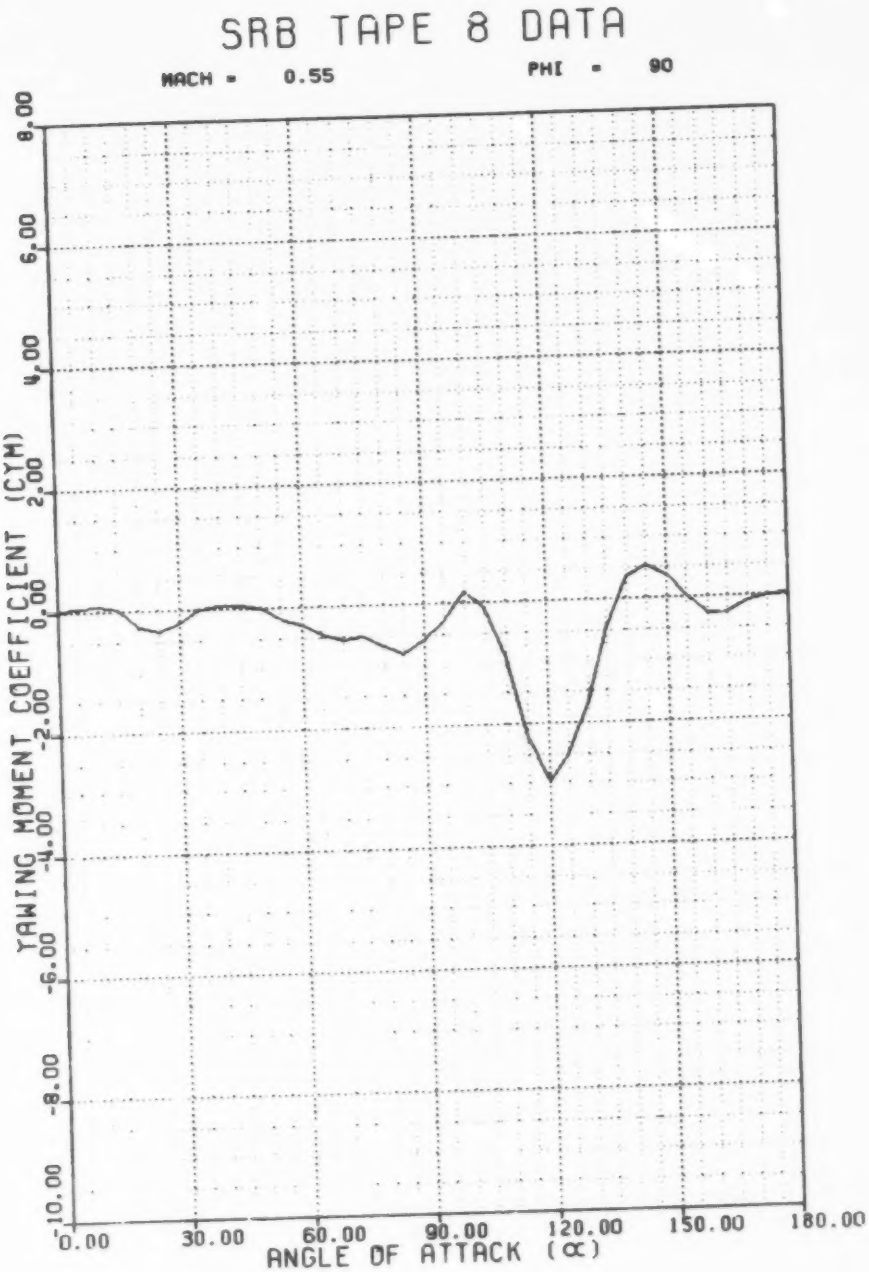
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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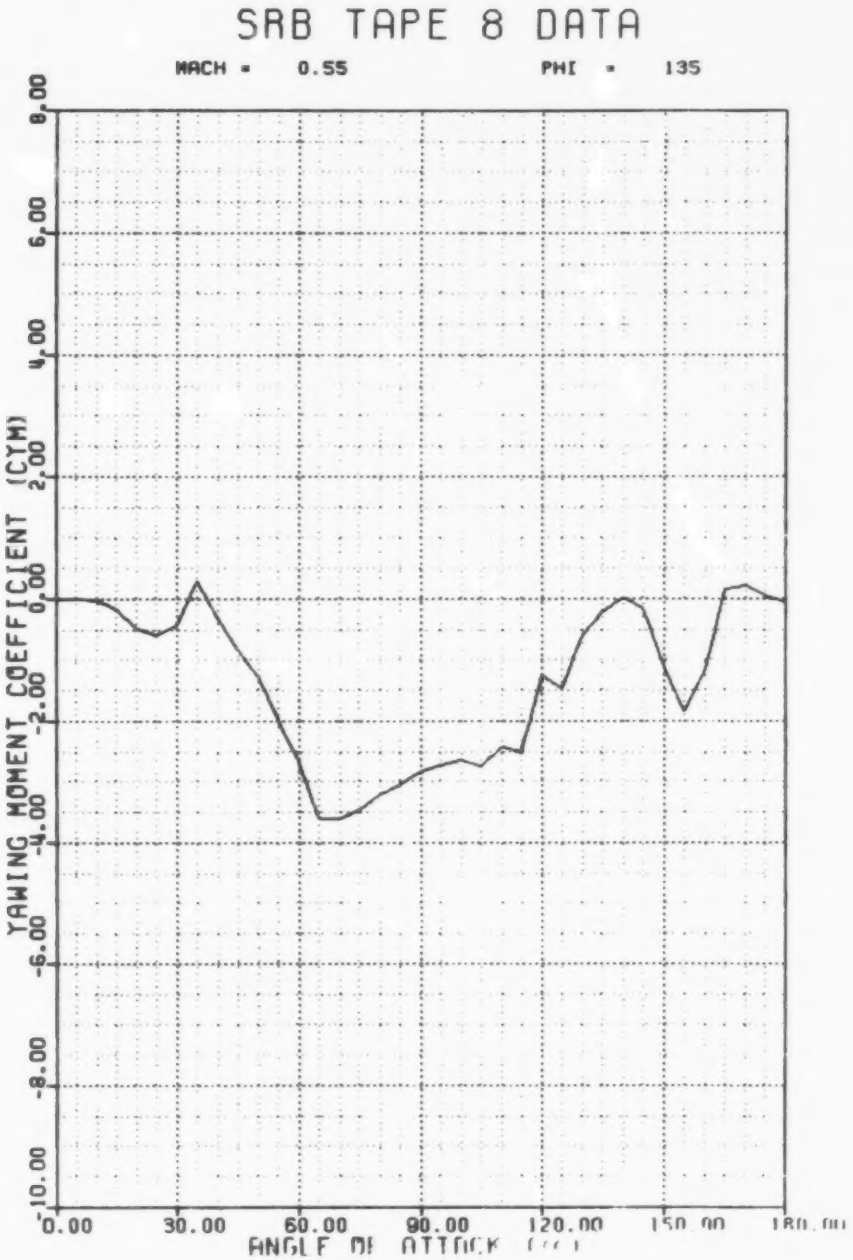
ANGLE OF ATTACK (α)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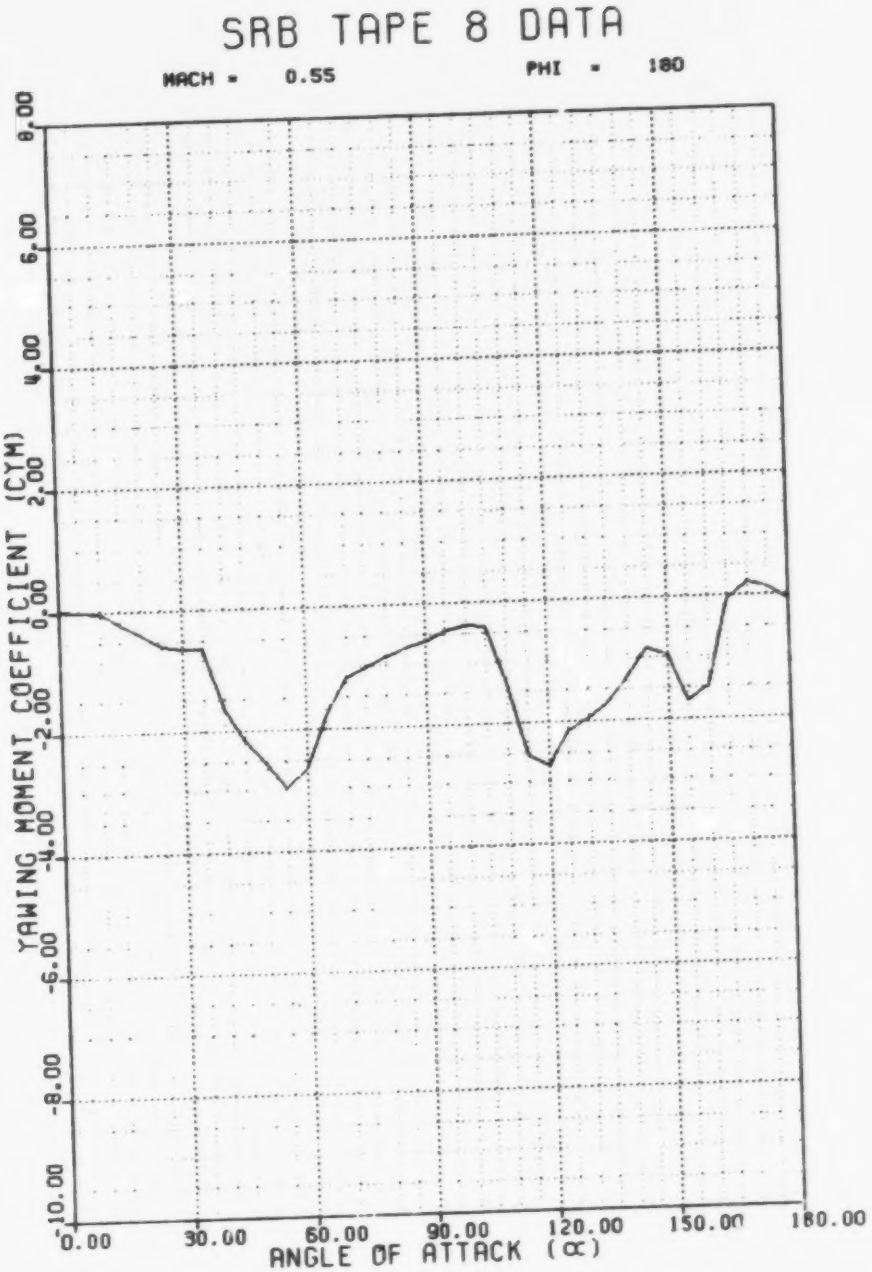
ANGLE OF ATTACK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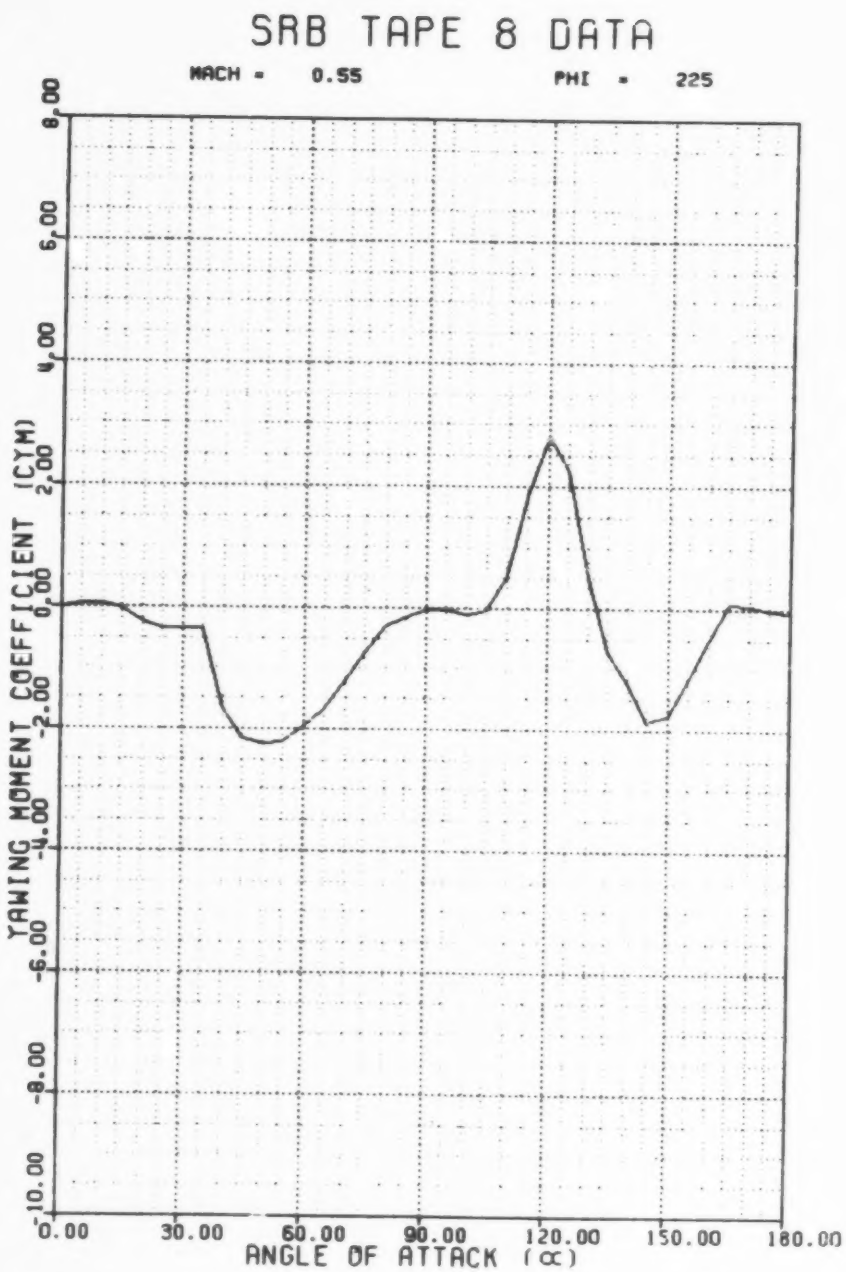
ANGLE OF ATTACK (α)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MACH = 0.55
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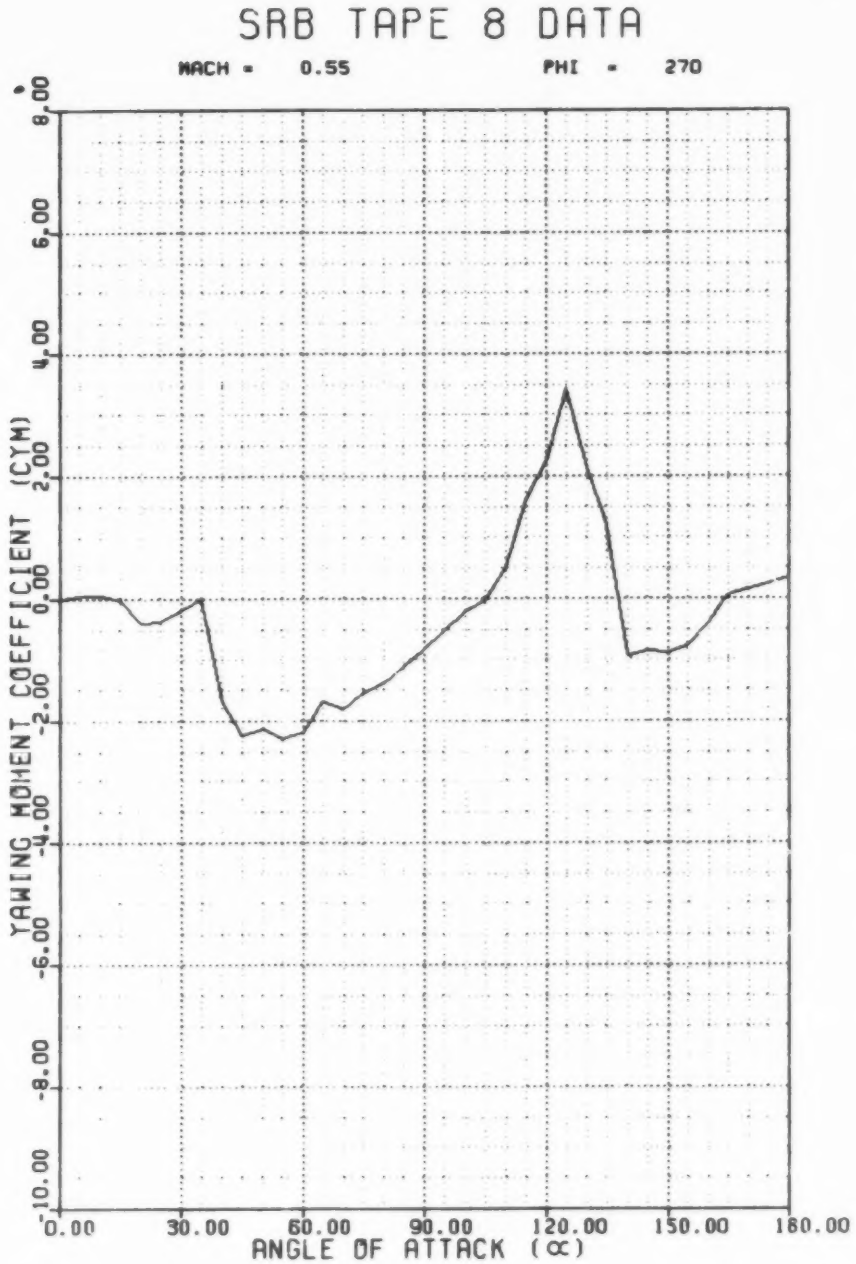
ANGLE OF ATTACK (α)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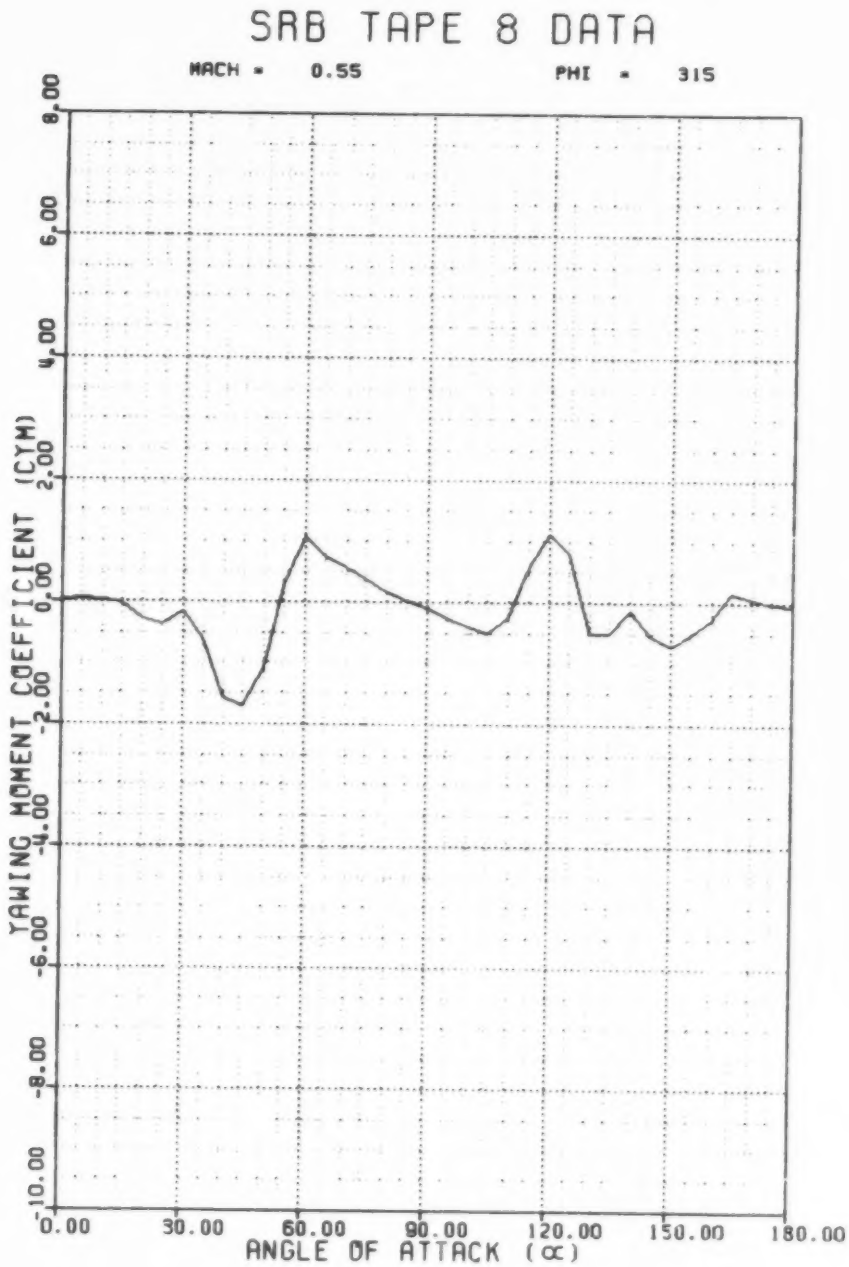
ANGLE OF ATTACK (α)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-8.00
-10.00
YAWING MOMENT COEFFICIENT (CYM)
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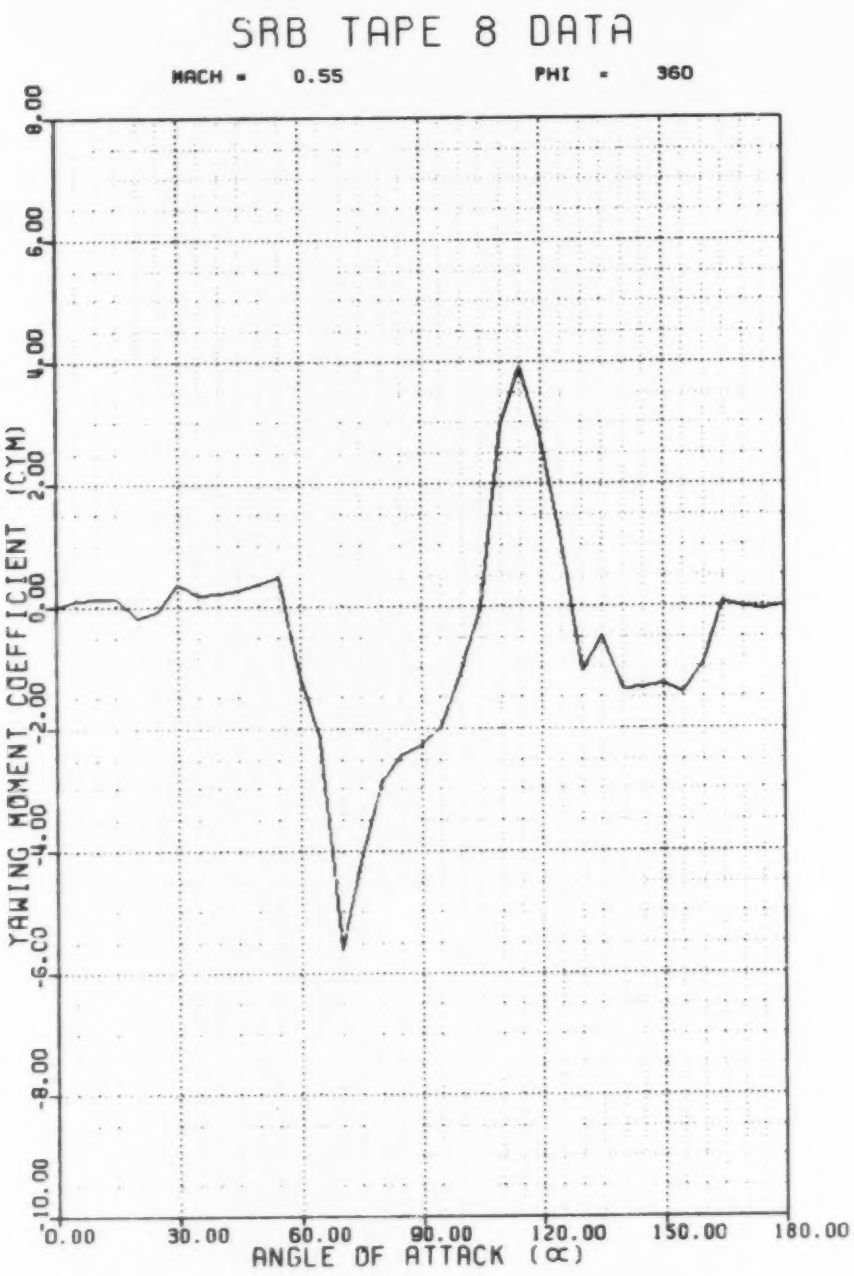
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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120.00
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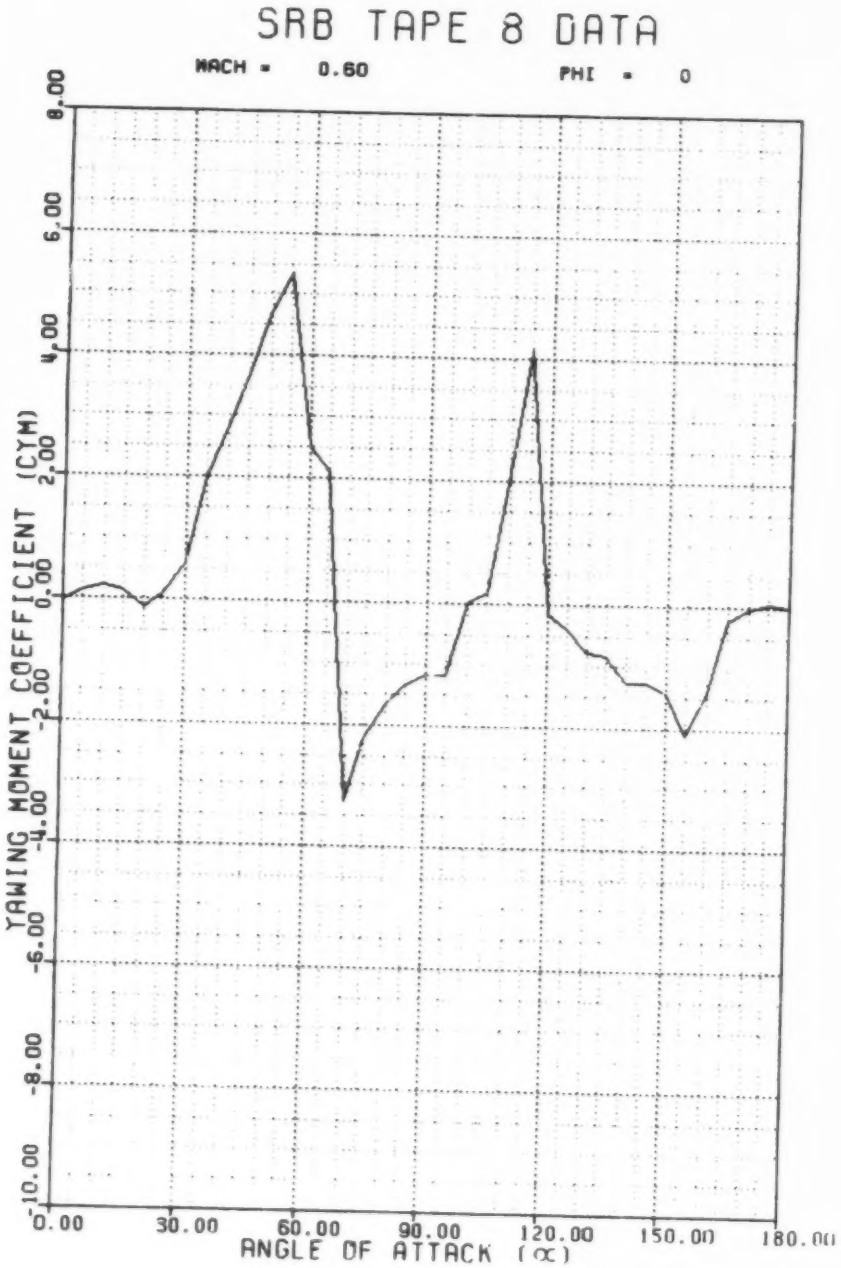
180.00
ANGLE OF ATTACK (α)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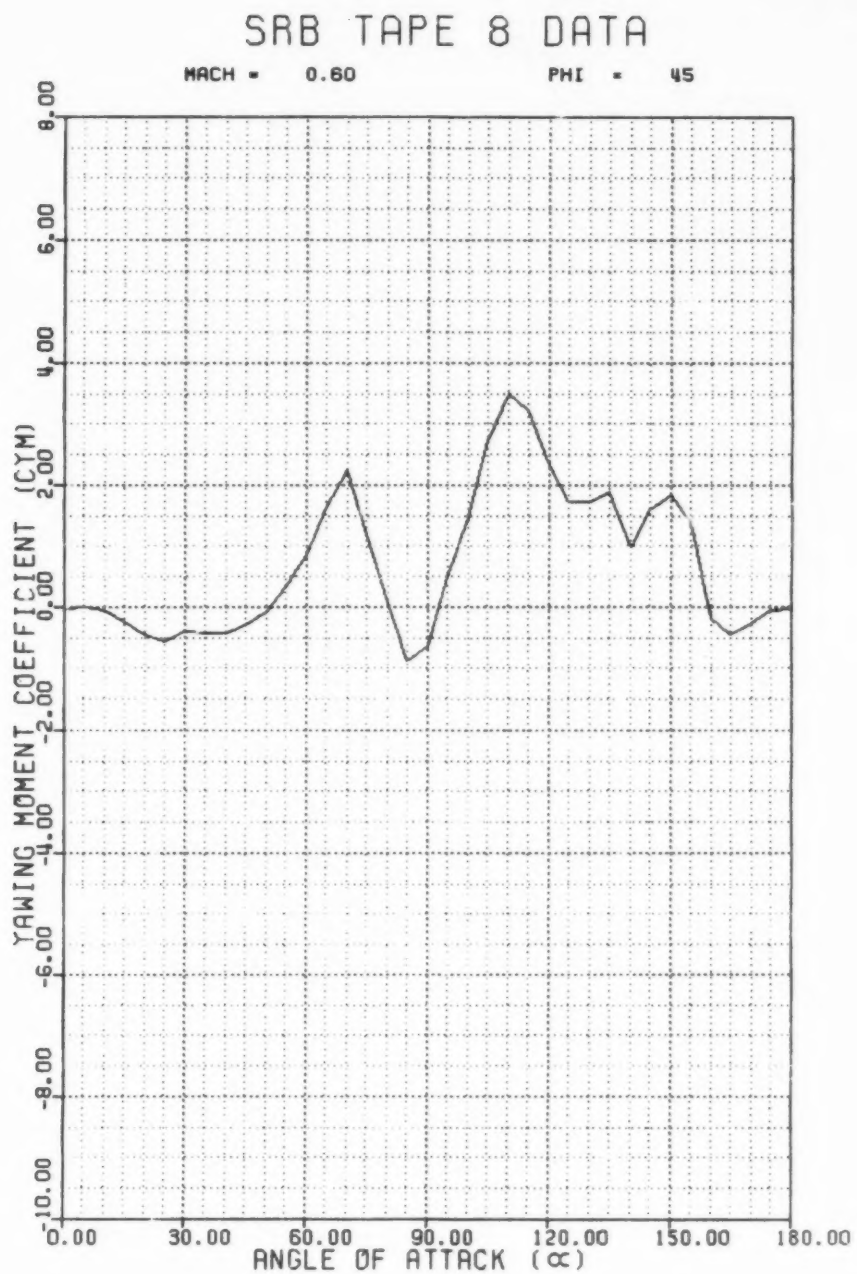
ANGLE OF ATTACK (α)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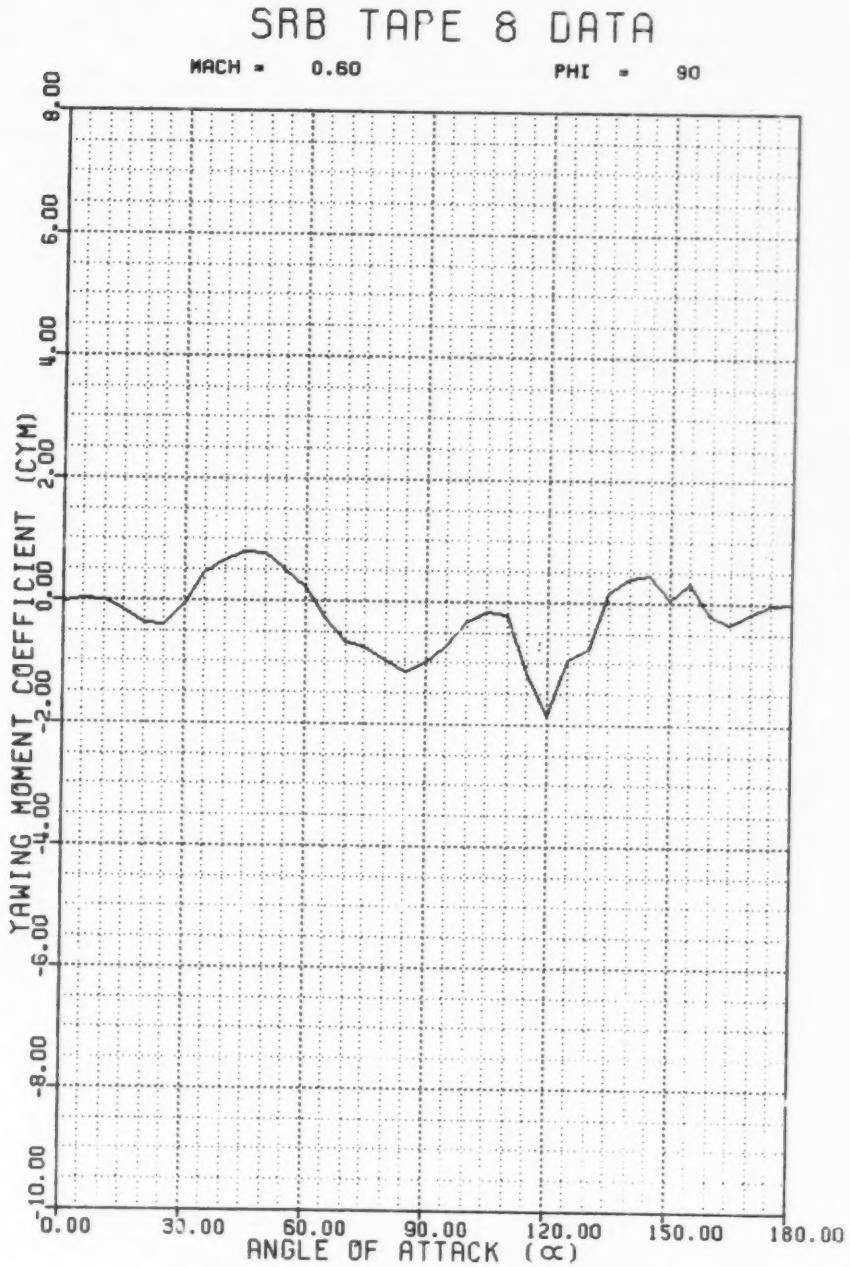
ANGLE OF ATTACK (α)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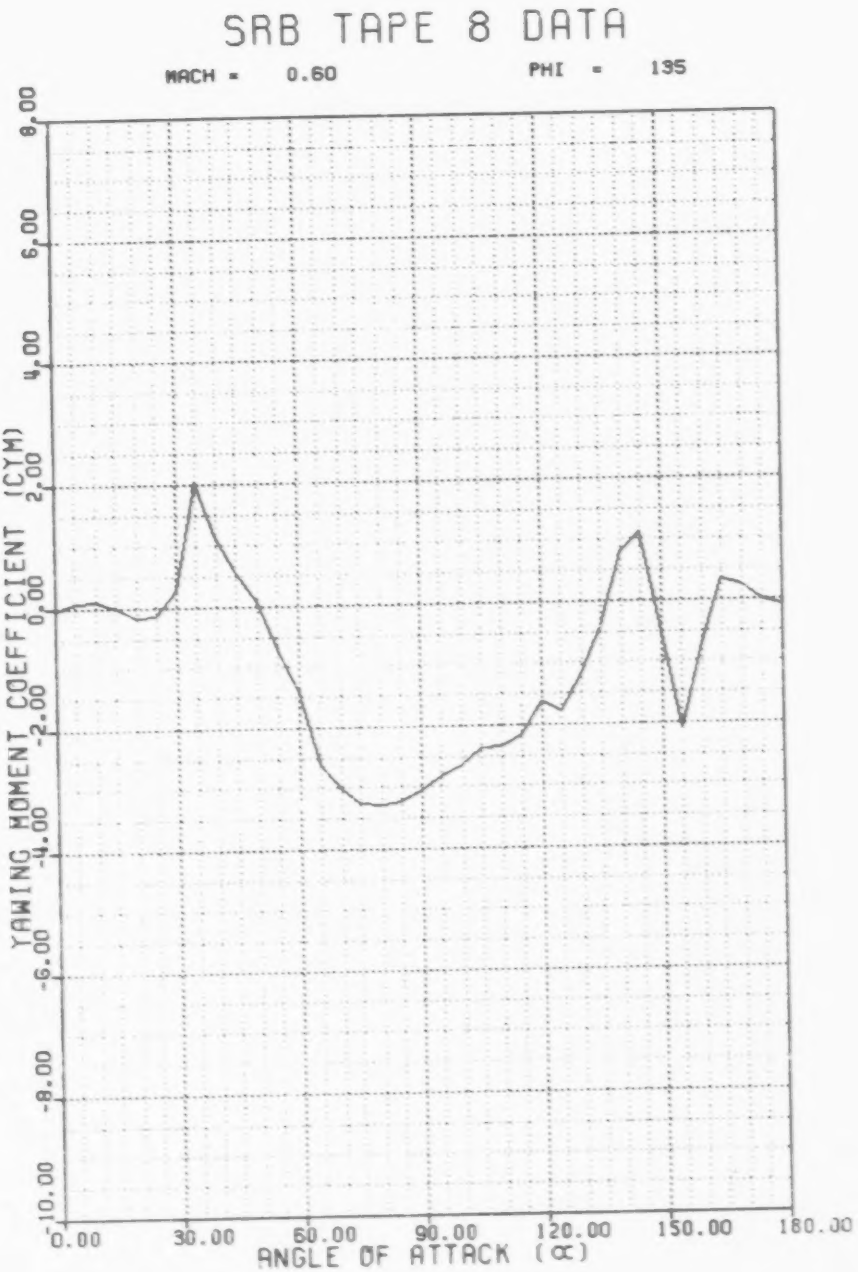
ANGLE OF ATTACK (α)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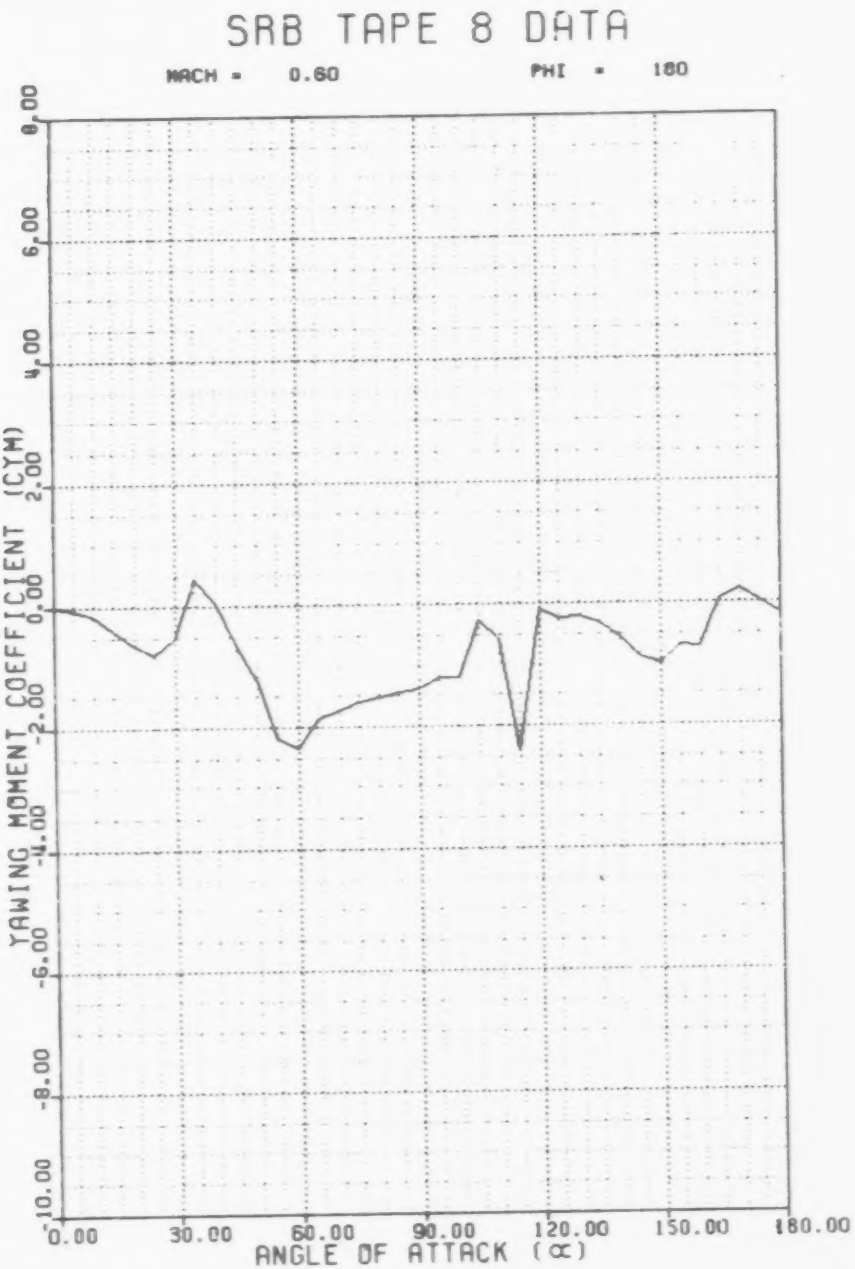
ANGLE OF ATTACK (α)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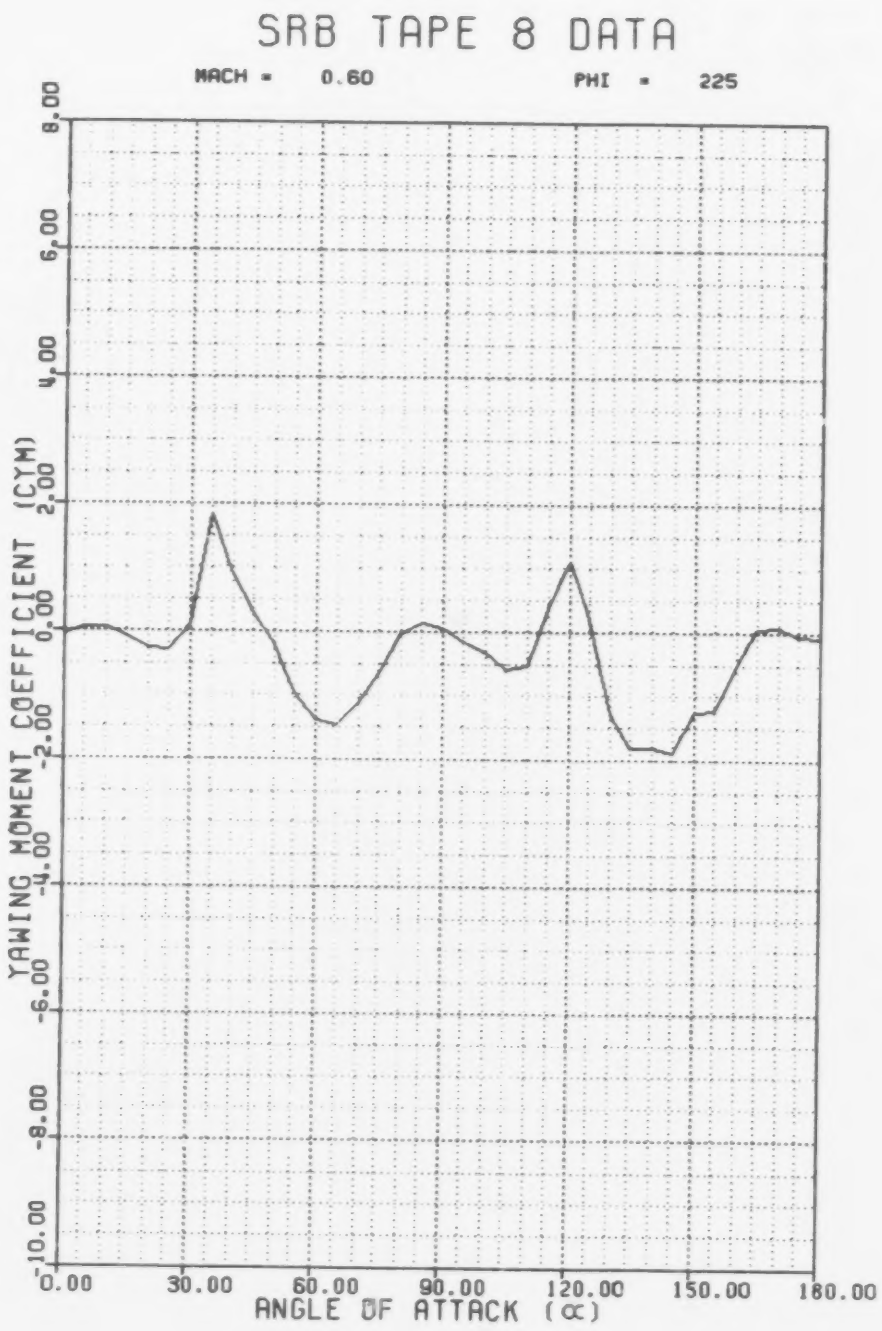
ANGLE OF ATTACK (α)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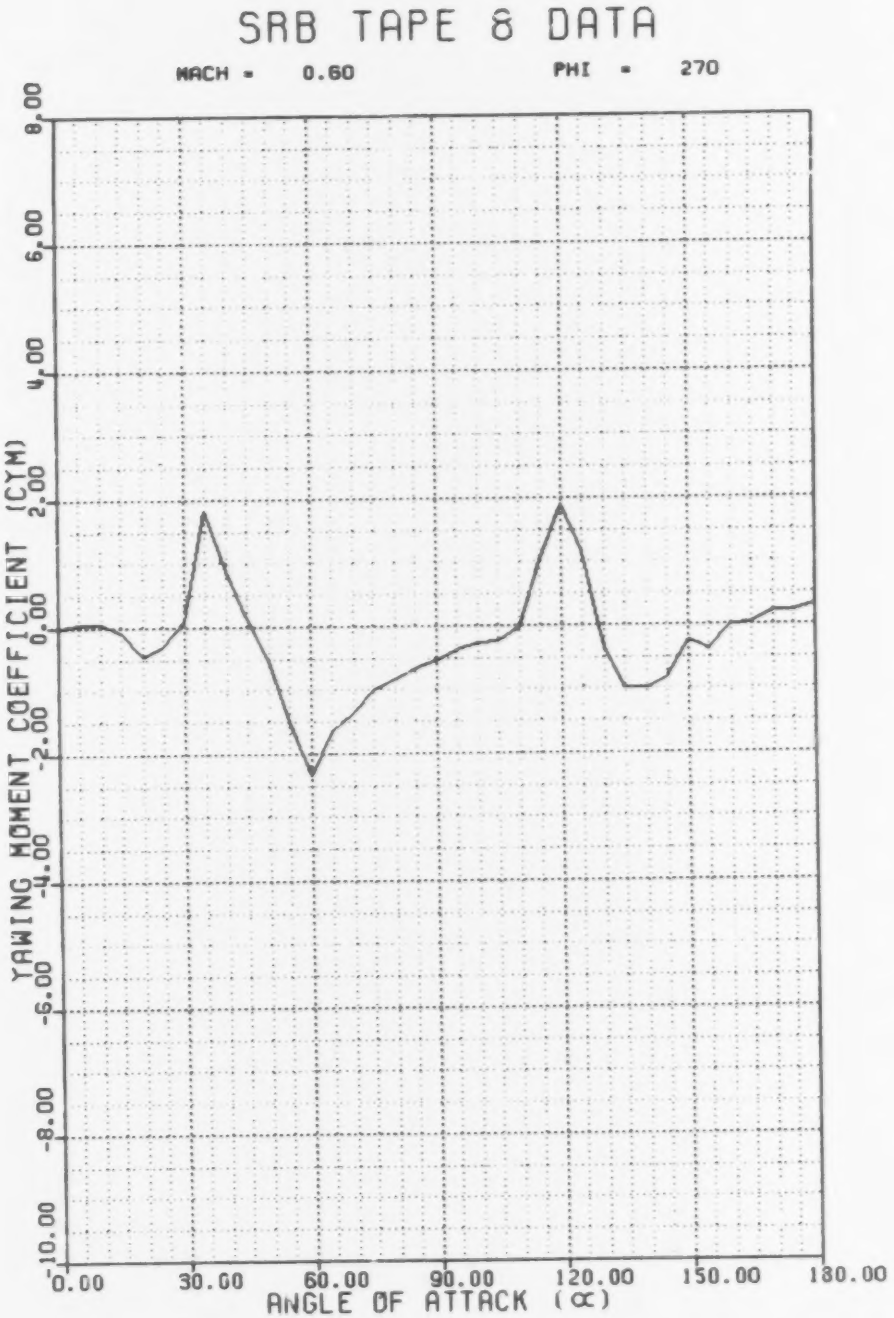
ANGLE OF ATTACK (α)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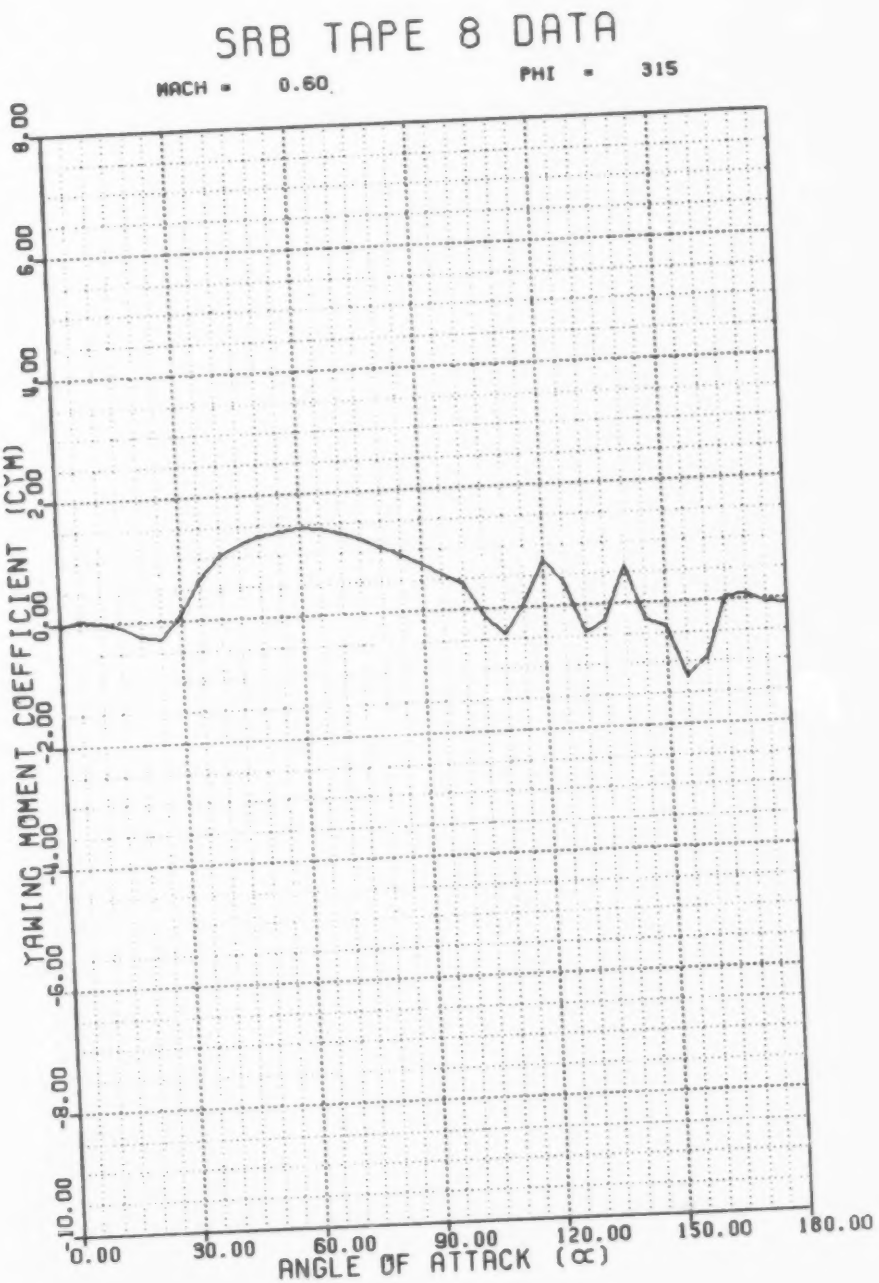
ANGLE OF ATTACK (α)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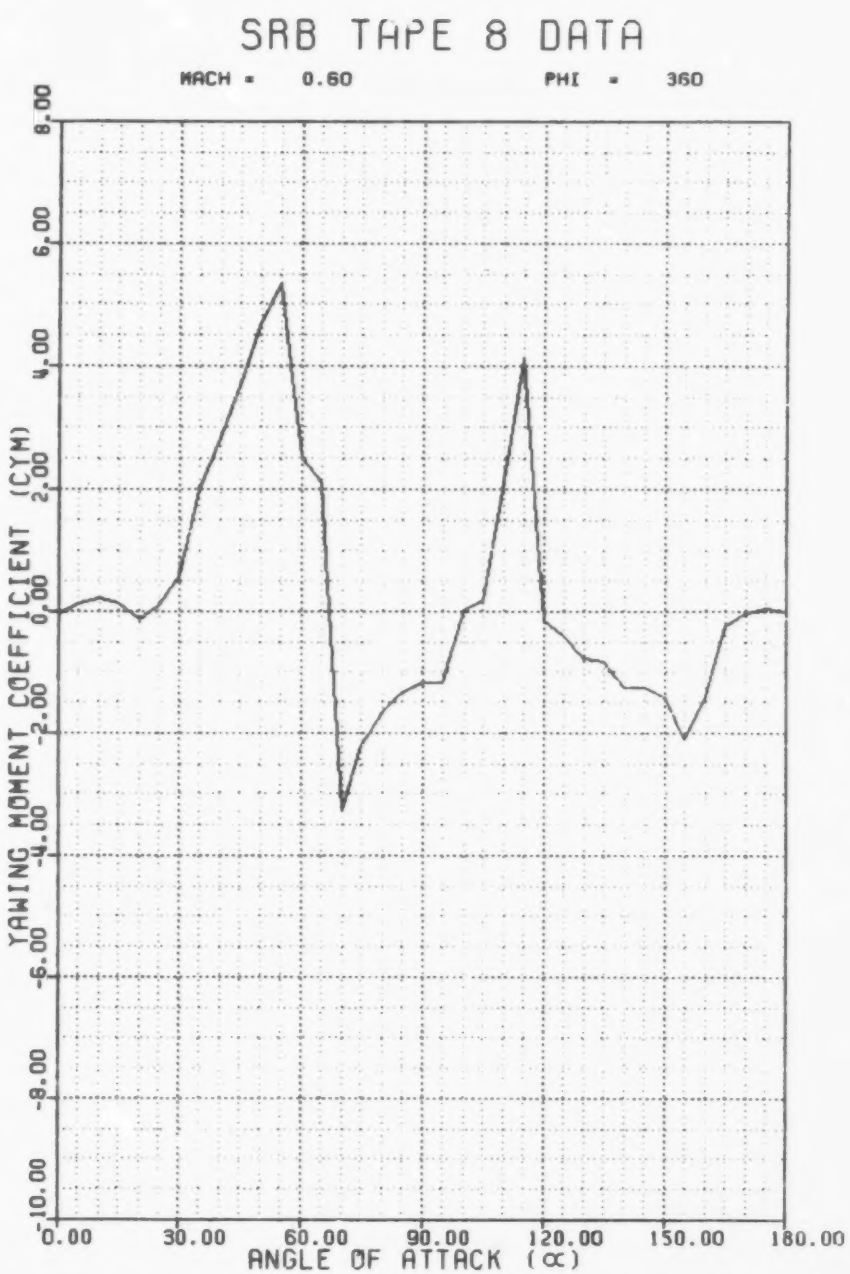
180.00
ANGLE OF ATTACK (α)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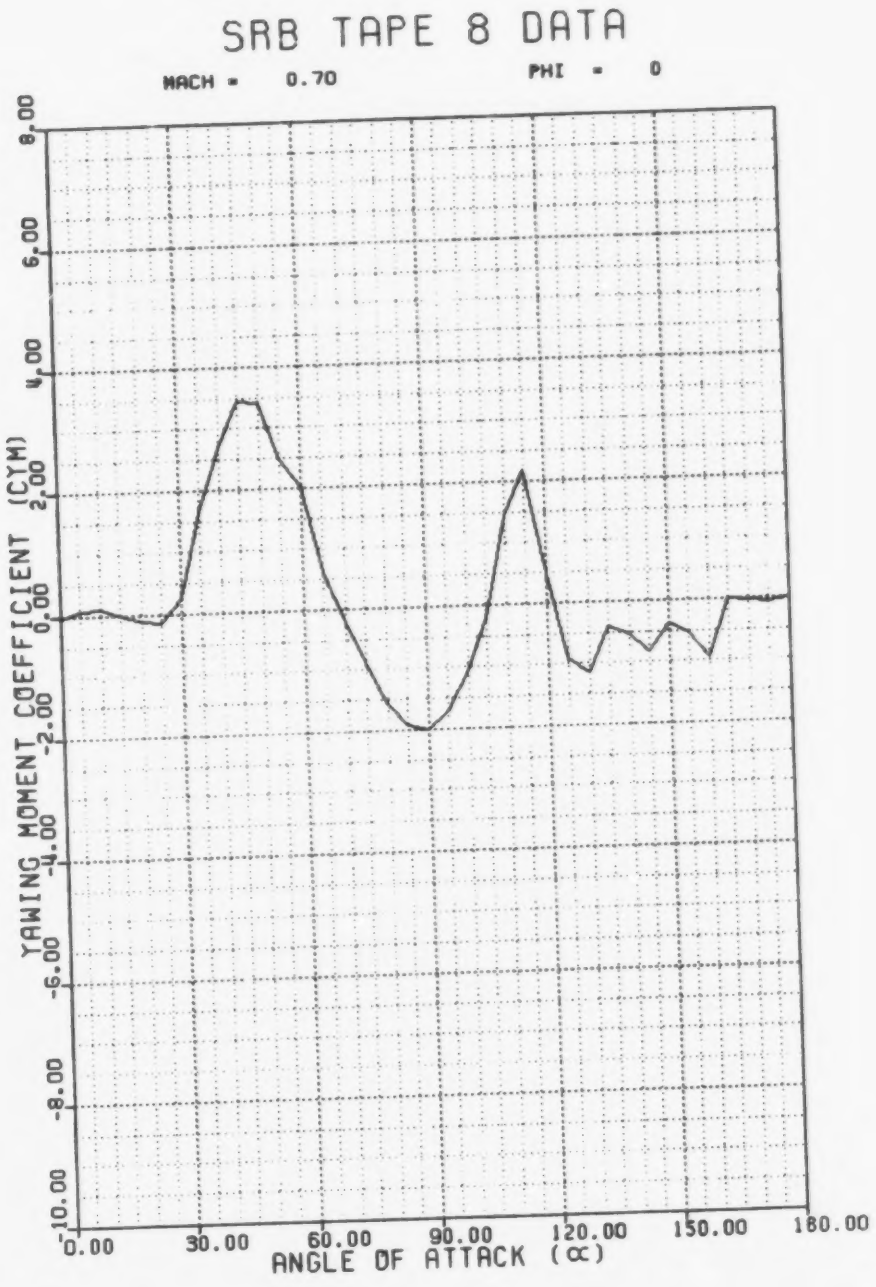
150.00
180.00
ANGLE OF ATTACK (α)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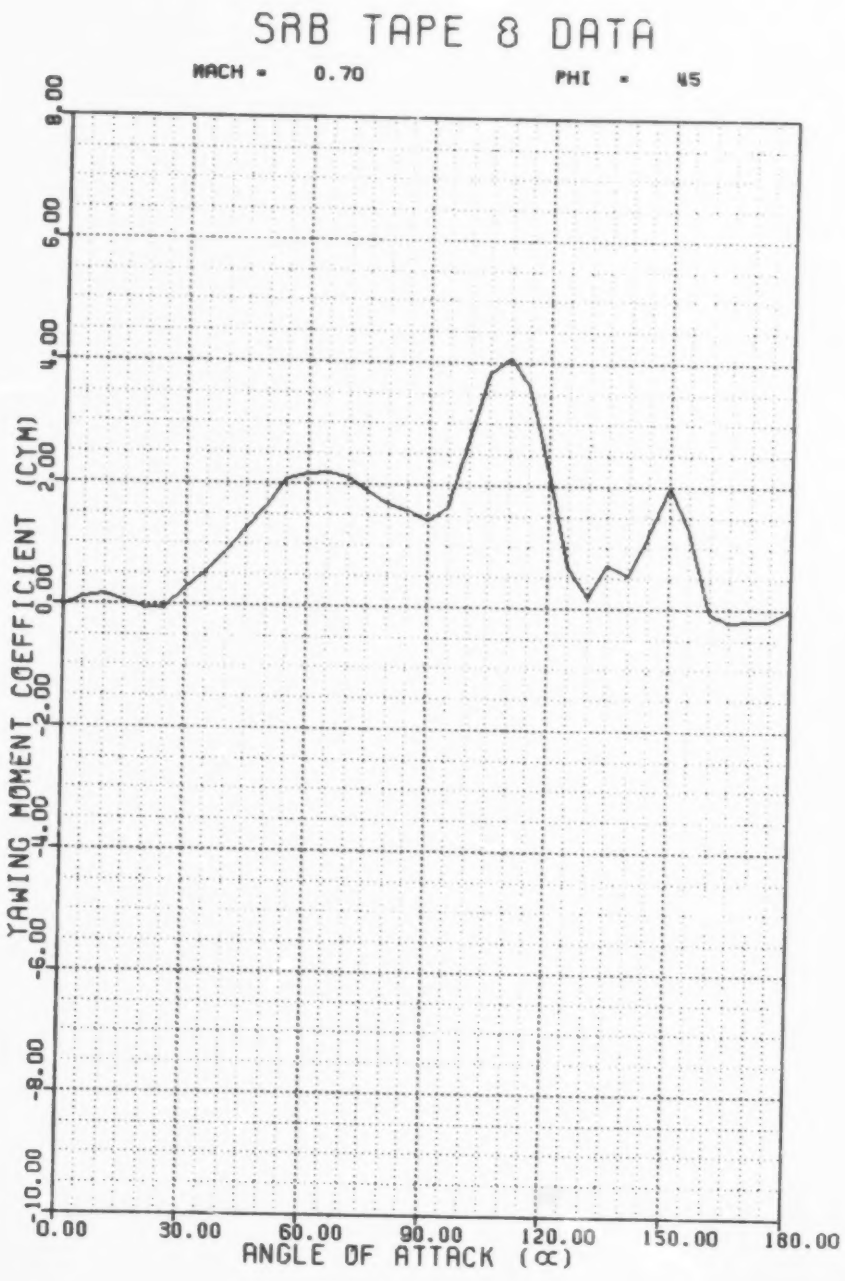
150.00
180.00
ANGLE OF ATTACK (α)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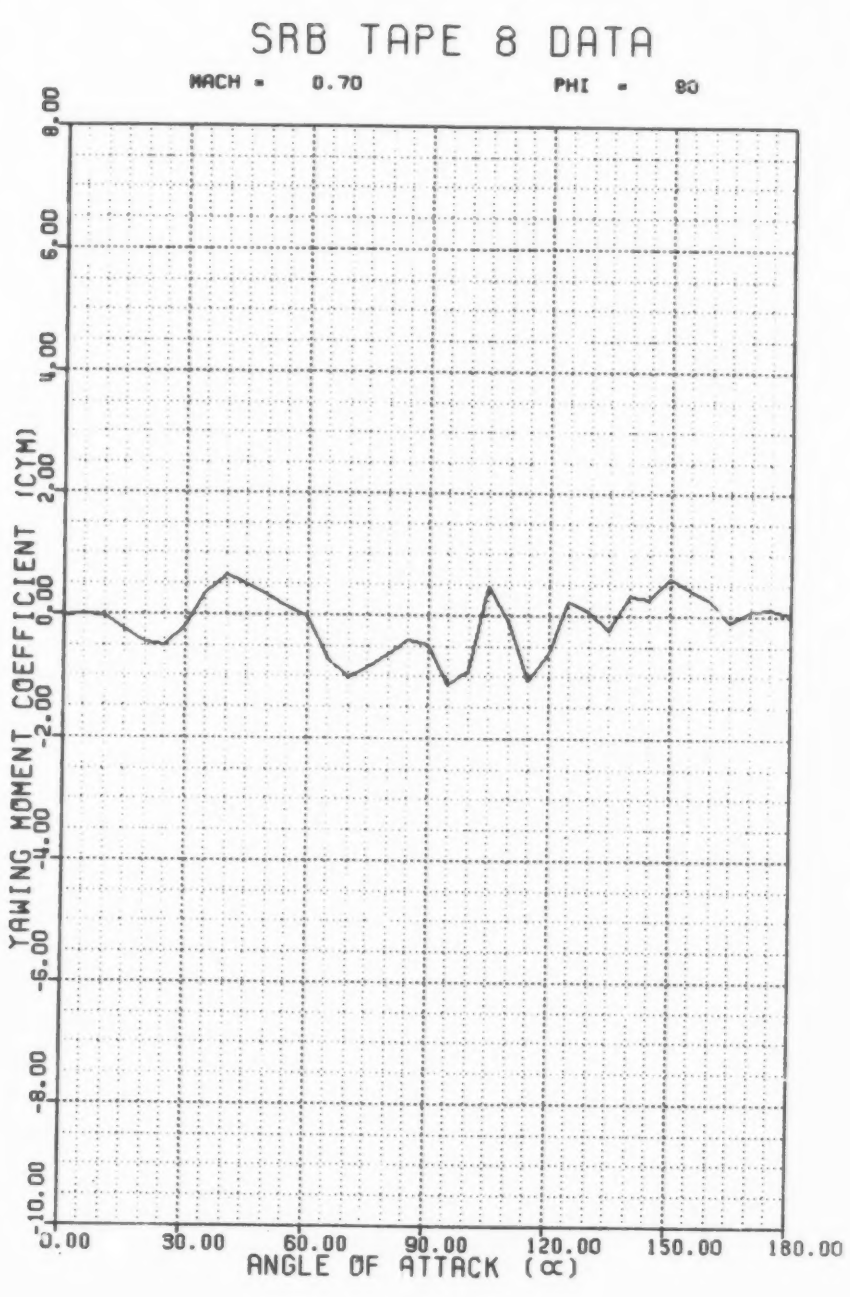
150.00
180.00
ANGLE OF ATTACK (α)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-10.00
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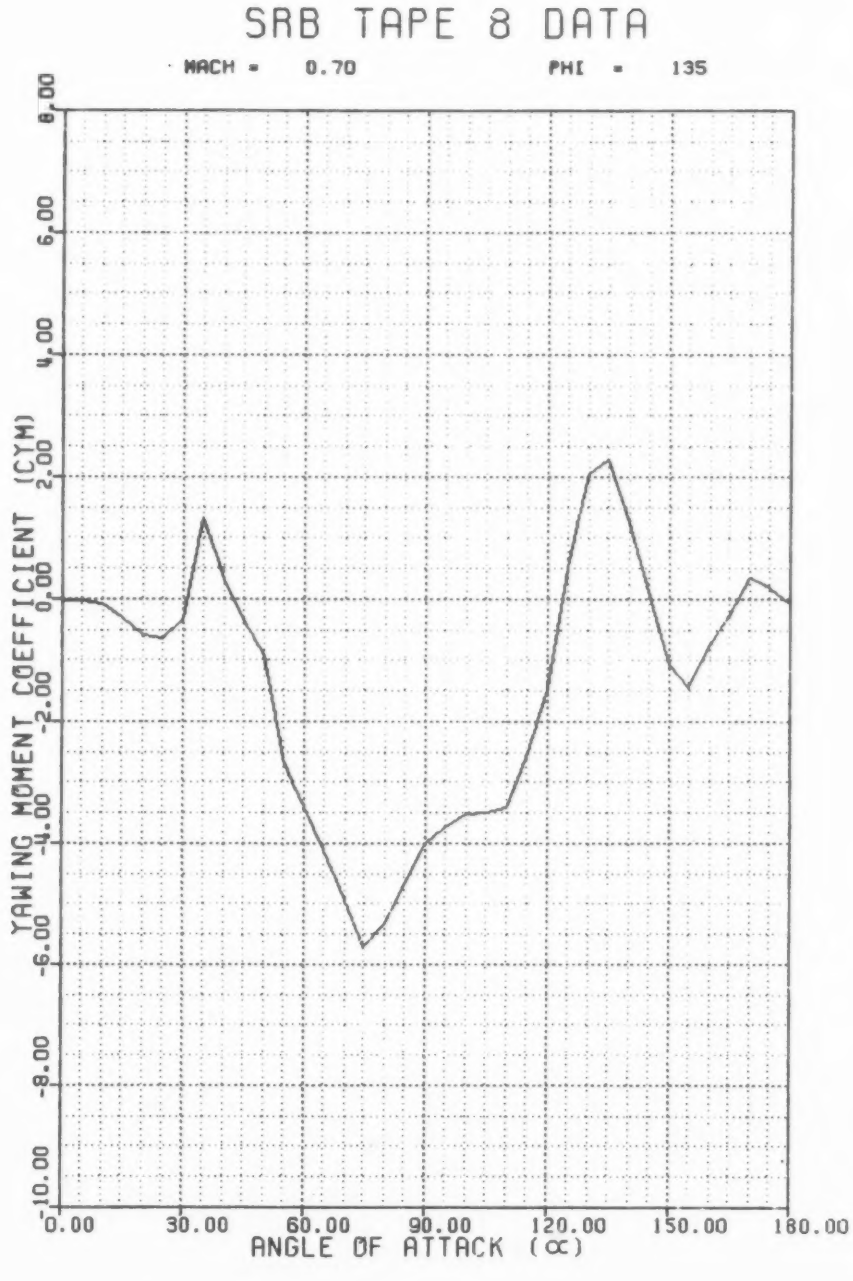
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
-4.00
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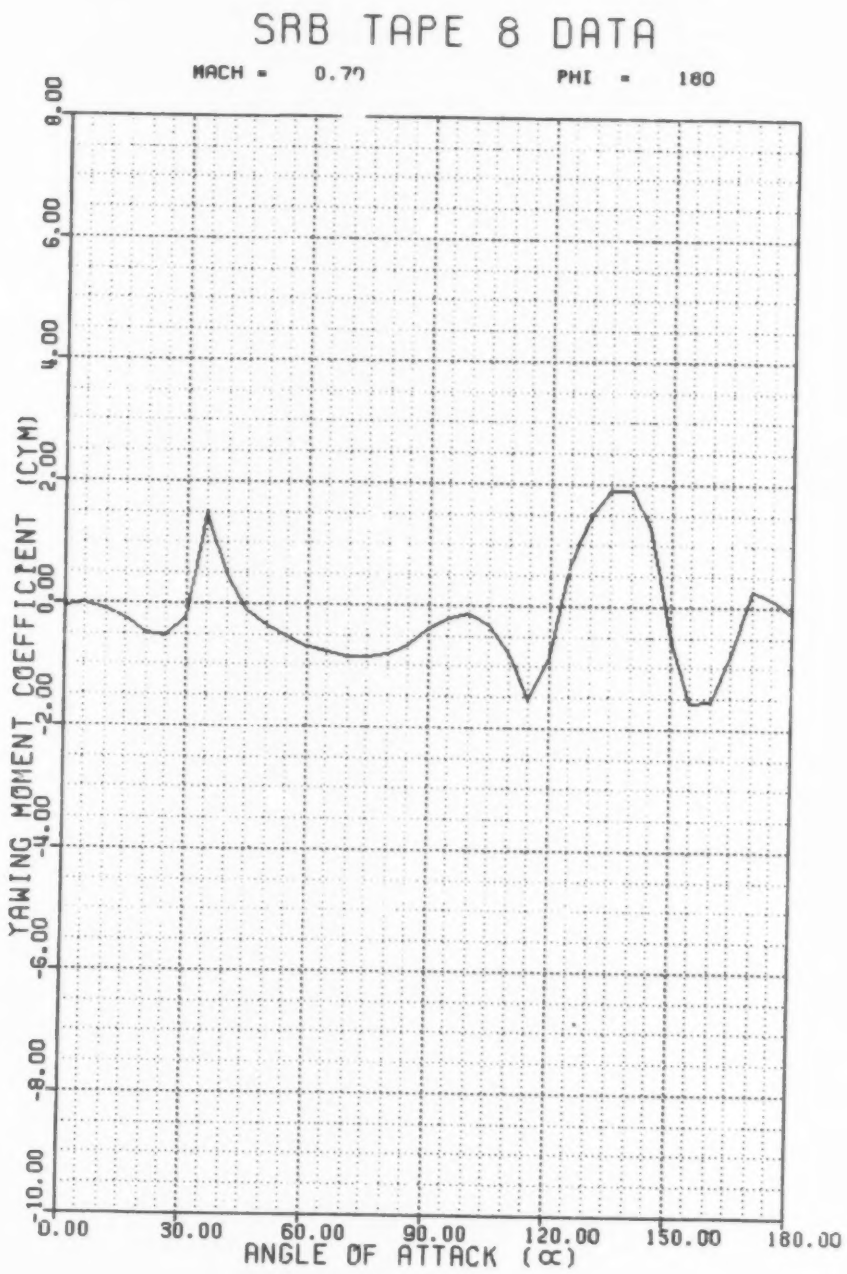
180.00
ANGLE OF ATTACK (α)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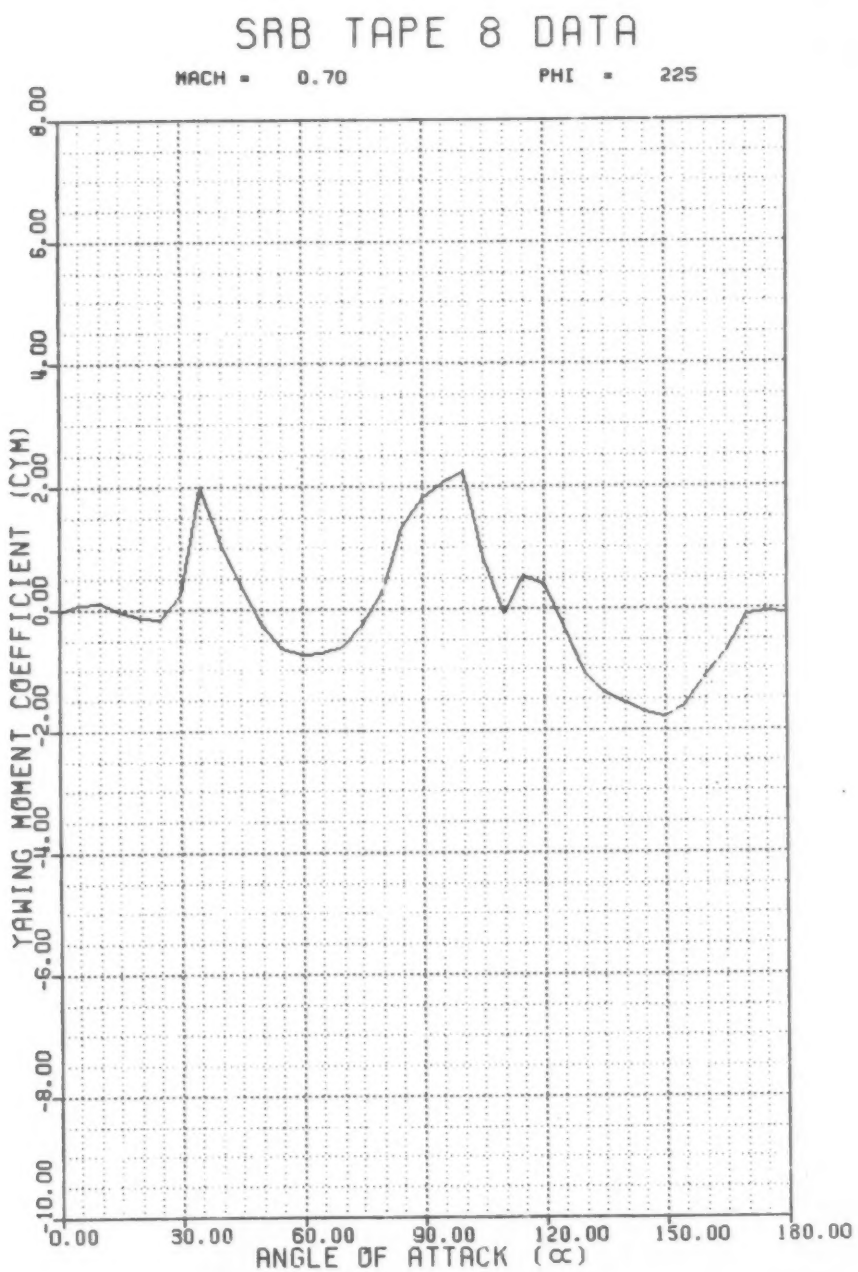
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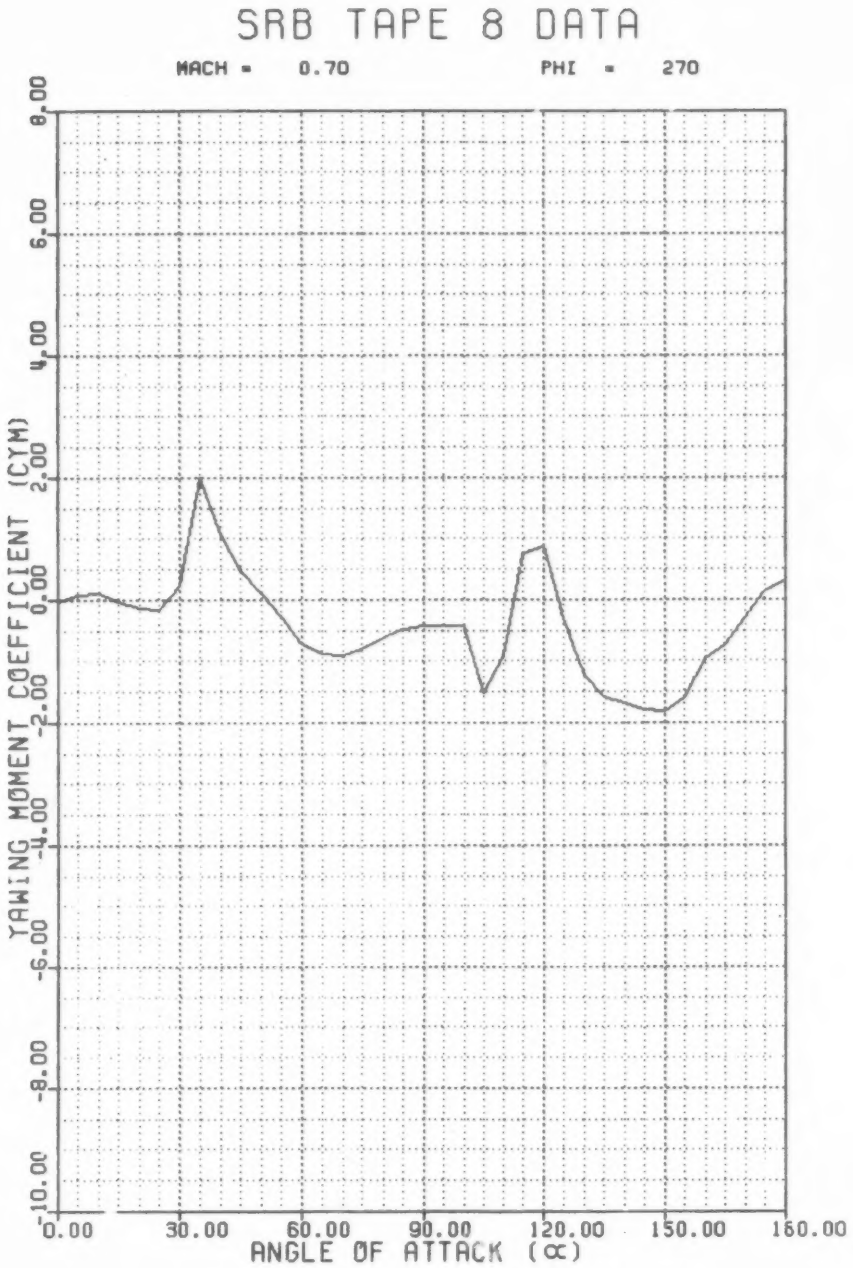
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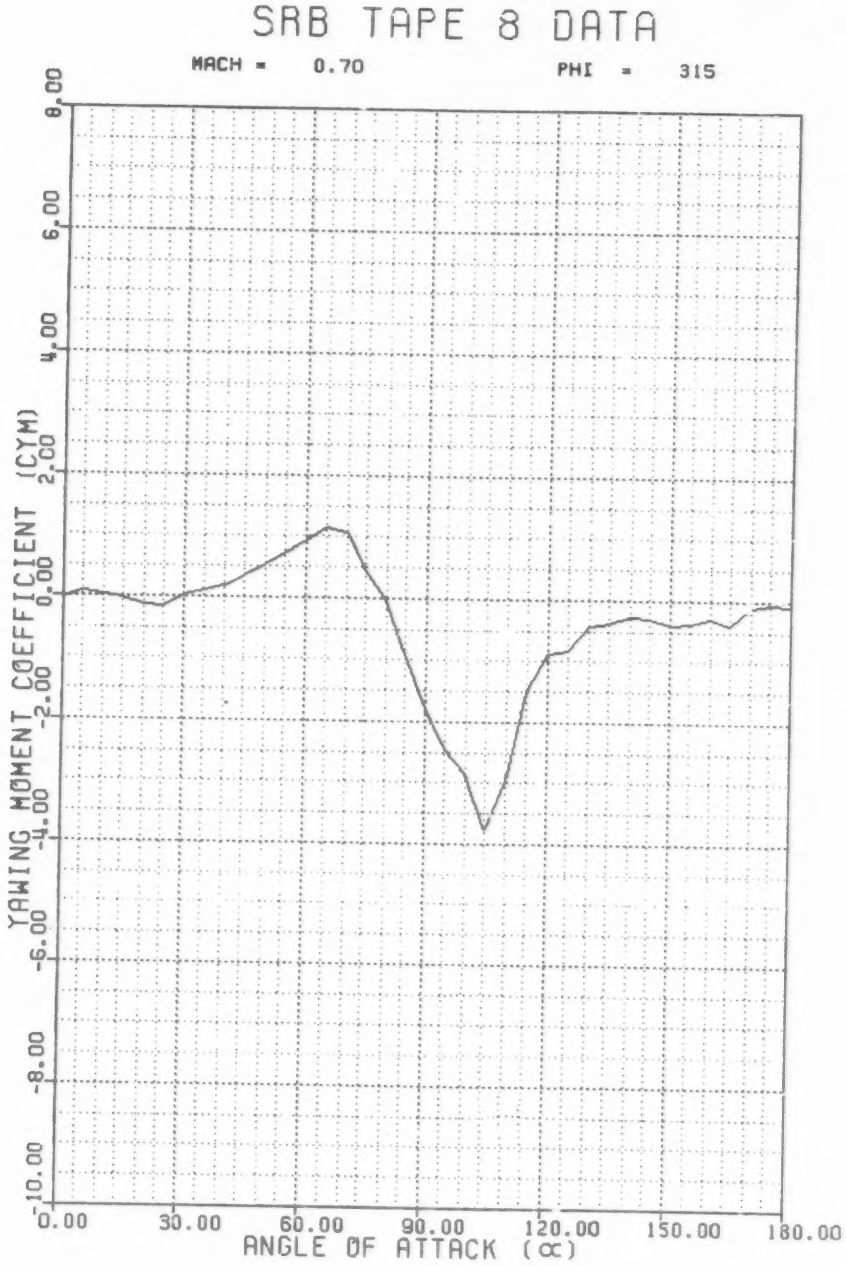
ANGLE OF ATTACK (α)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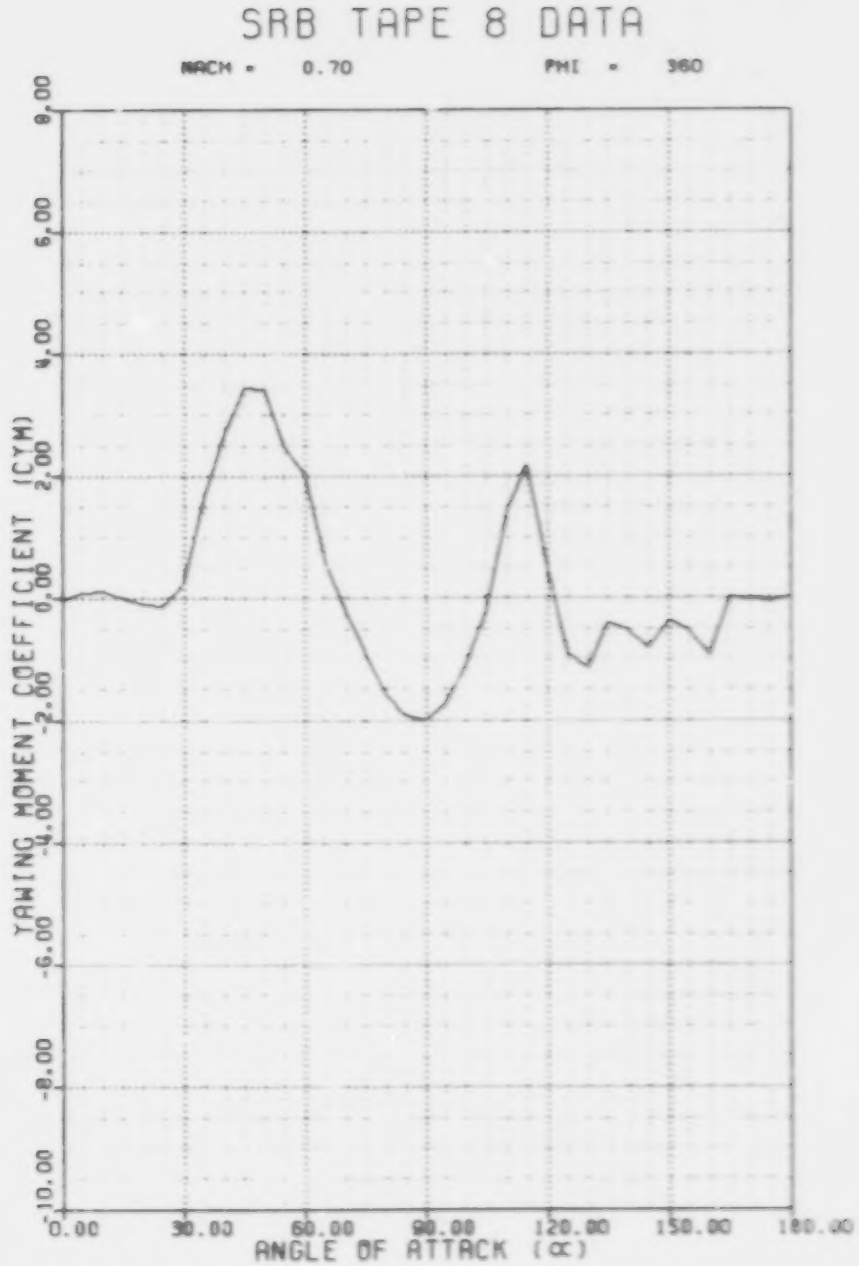
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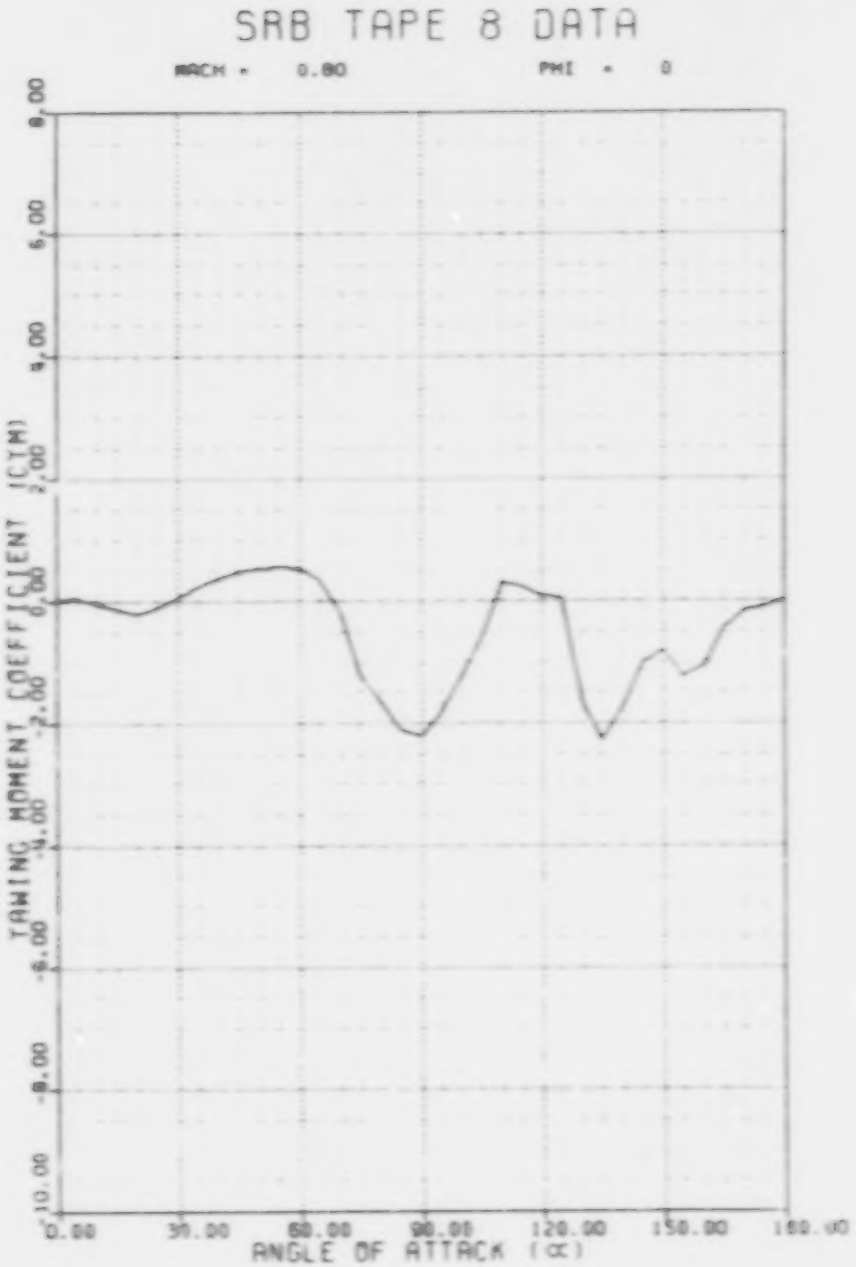
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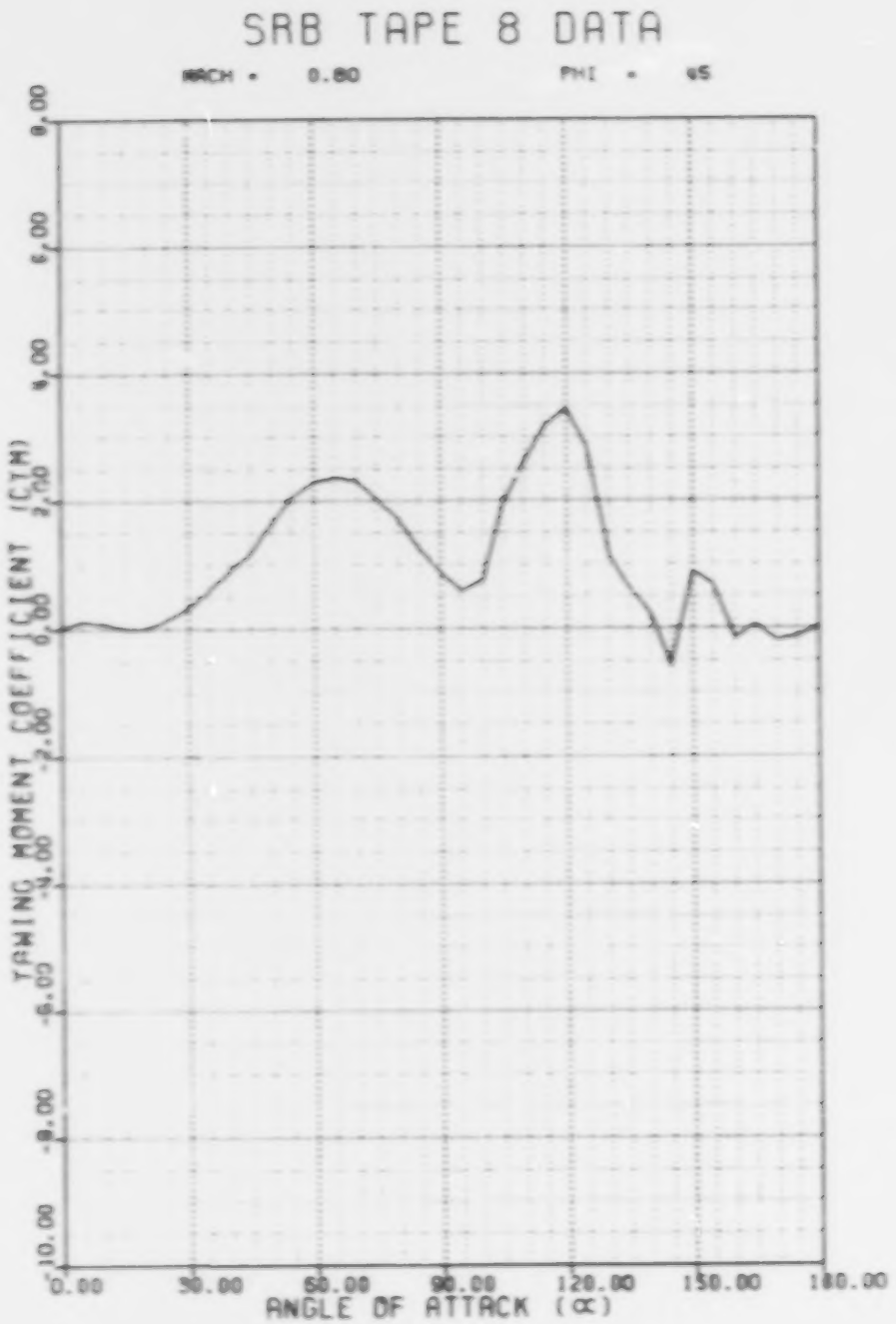
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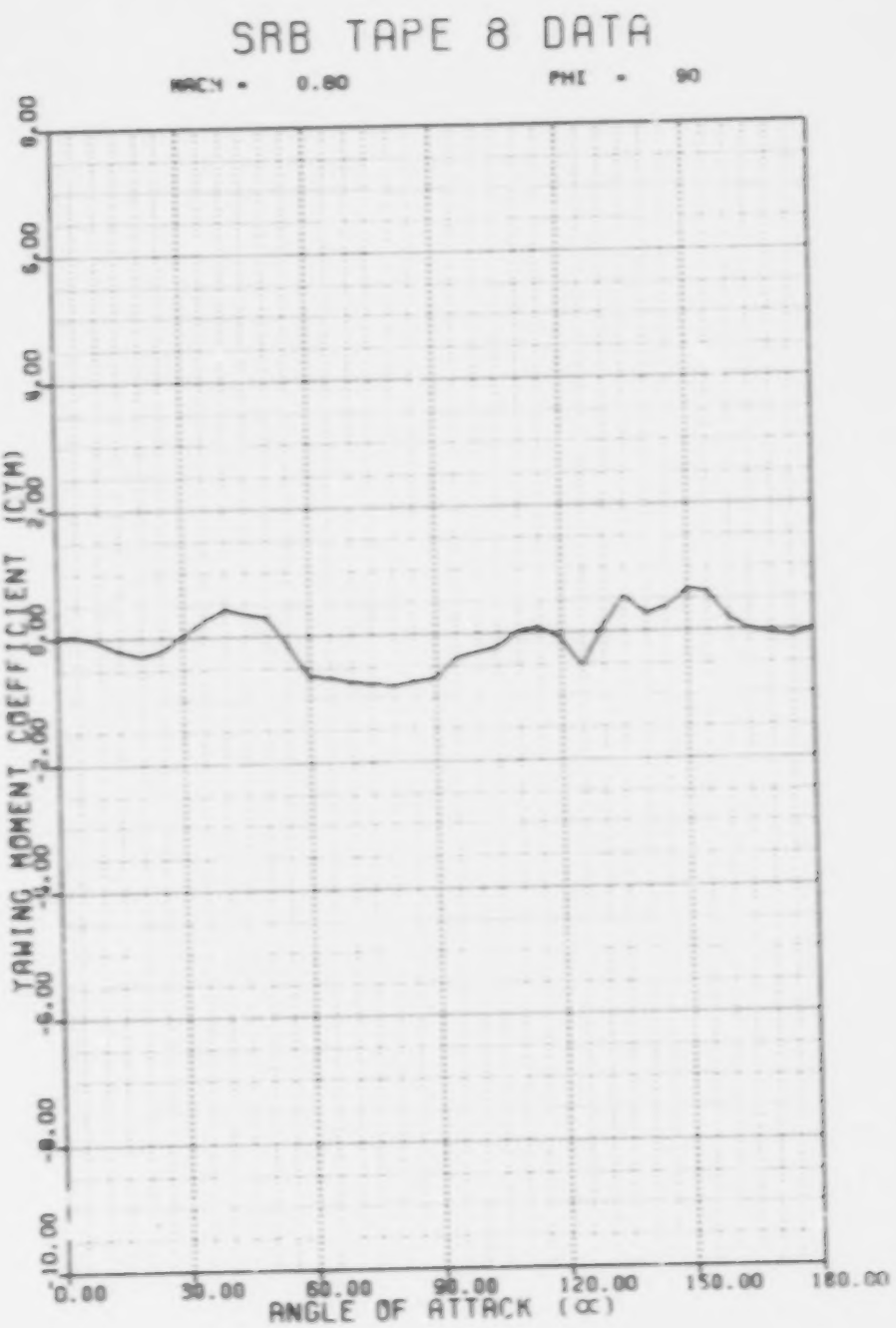
ANGLE OF ATTACK (α)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120.00
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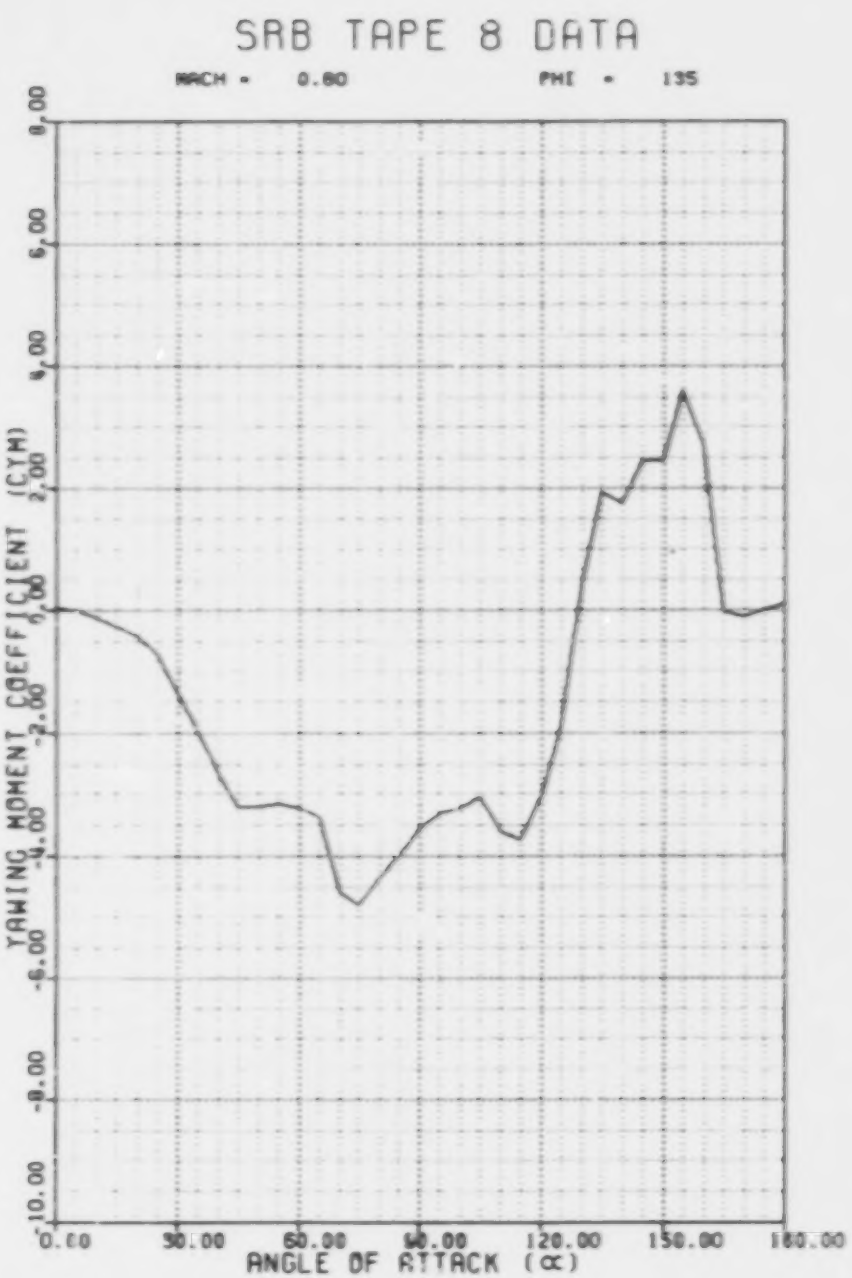
ANGLE OF ATTACK (α)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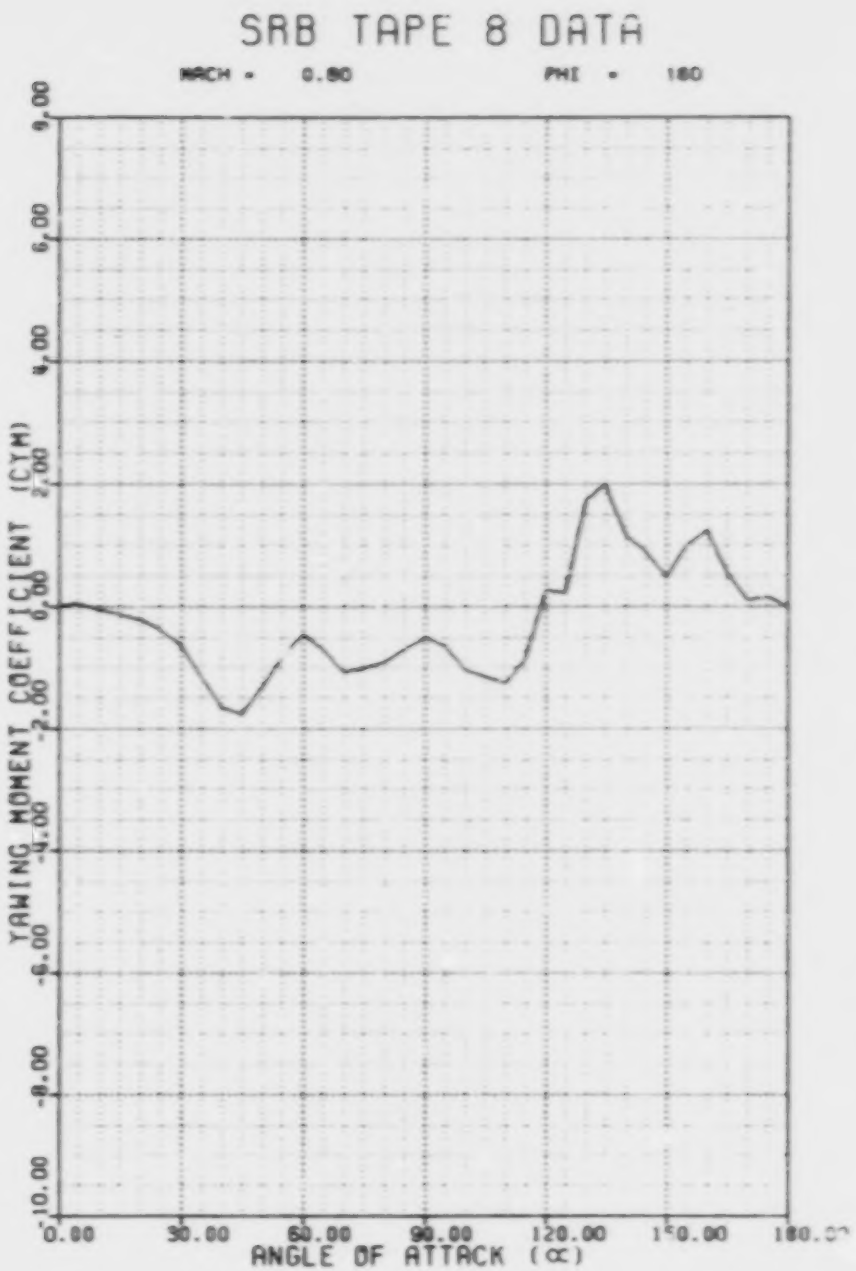
ANGLE OF ATTACK (α)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2.00
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-4.00
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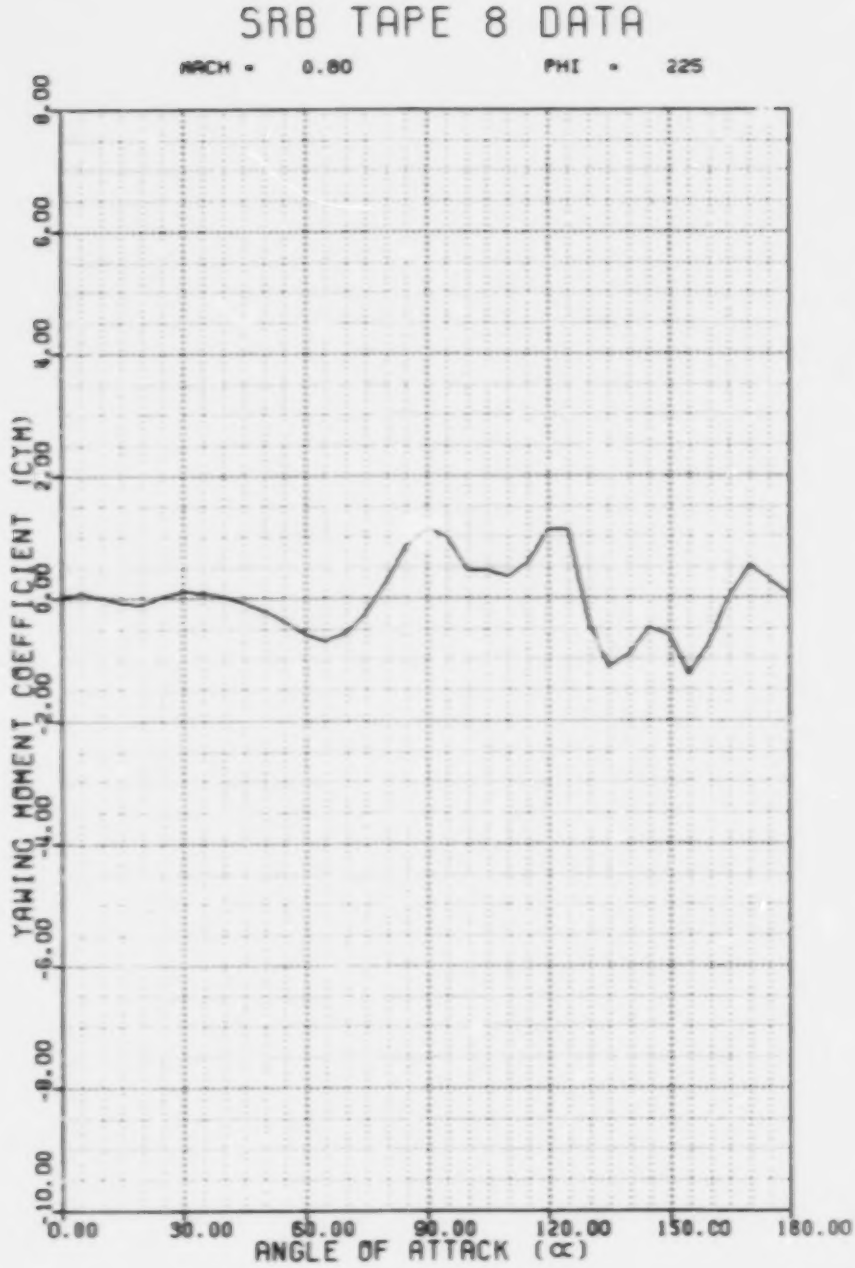
ANGLE OF ATTACK (α)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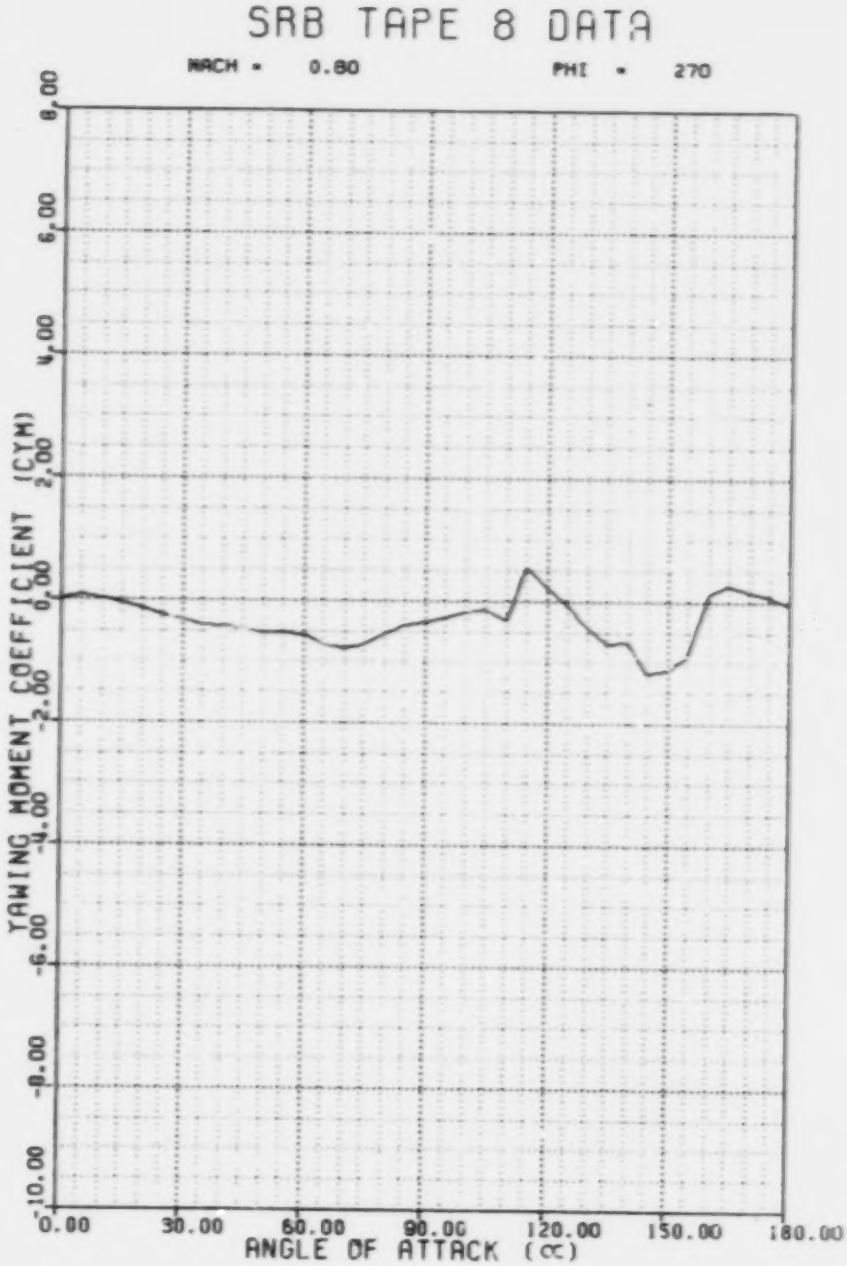
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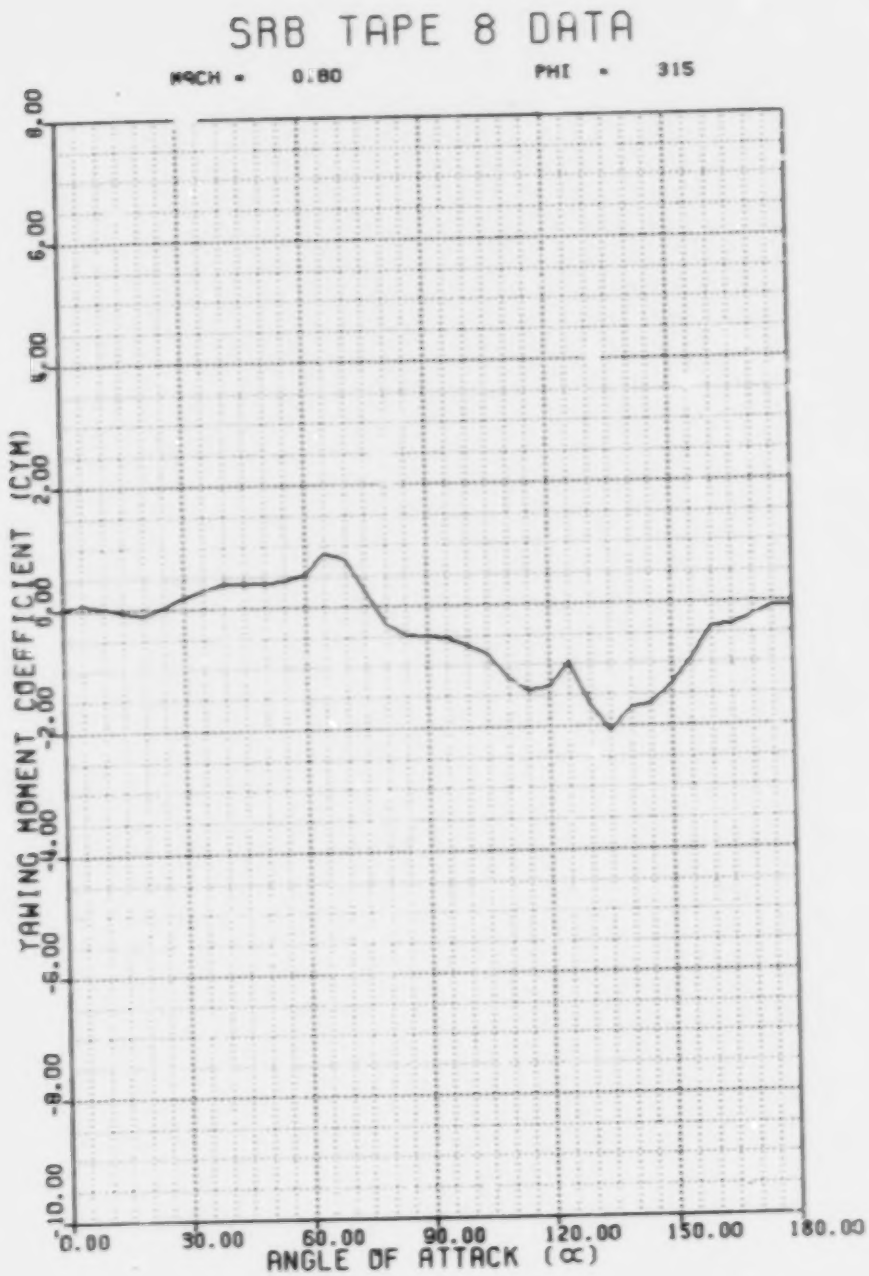
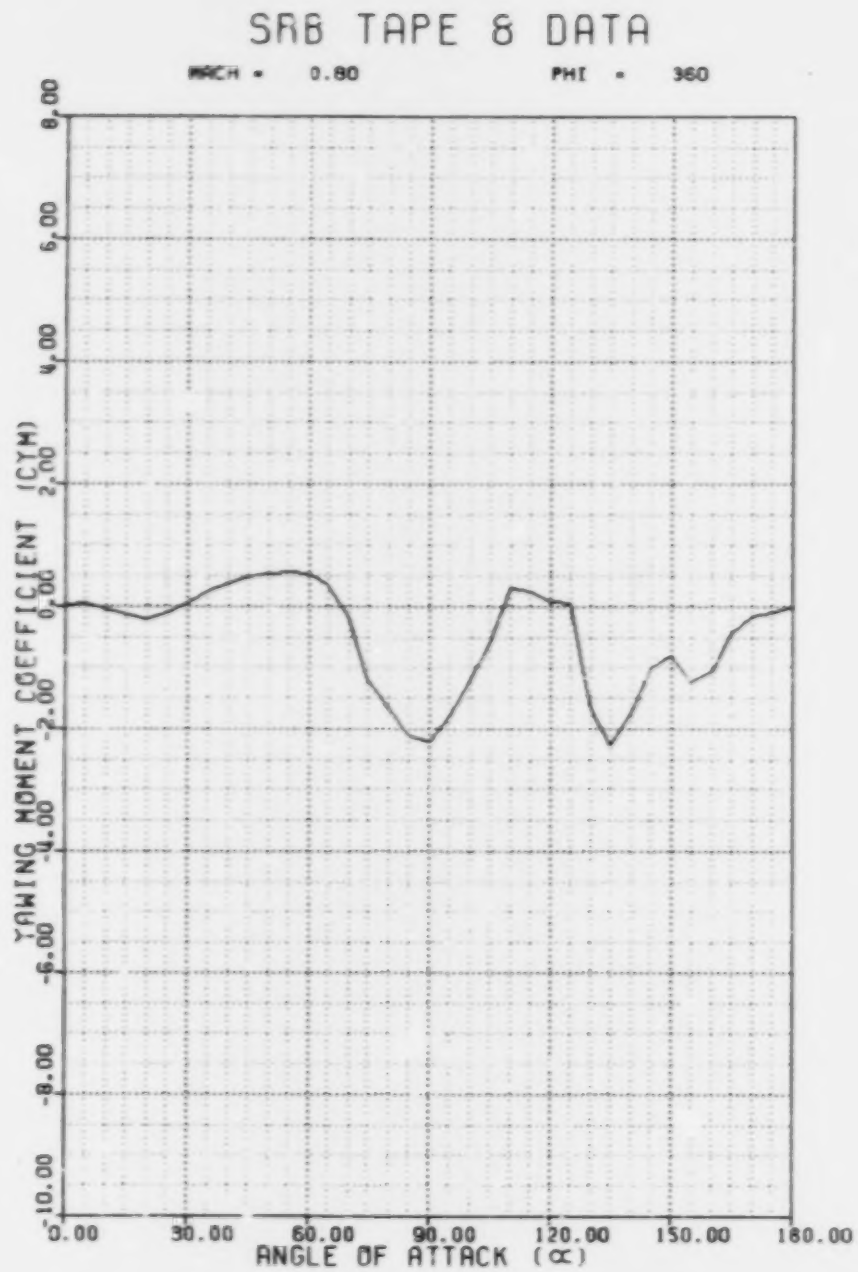
150.00
180.00
ANGLE OF ATTACK (α)

ORIGINAL PAGE IS
OF POOR QUALITY

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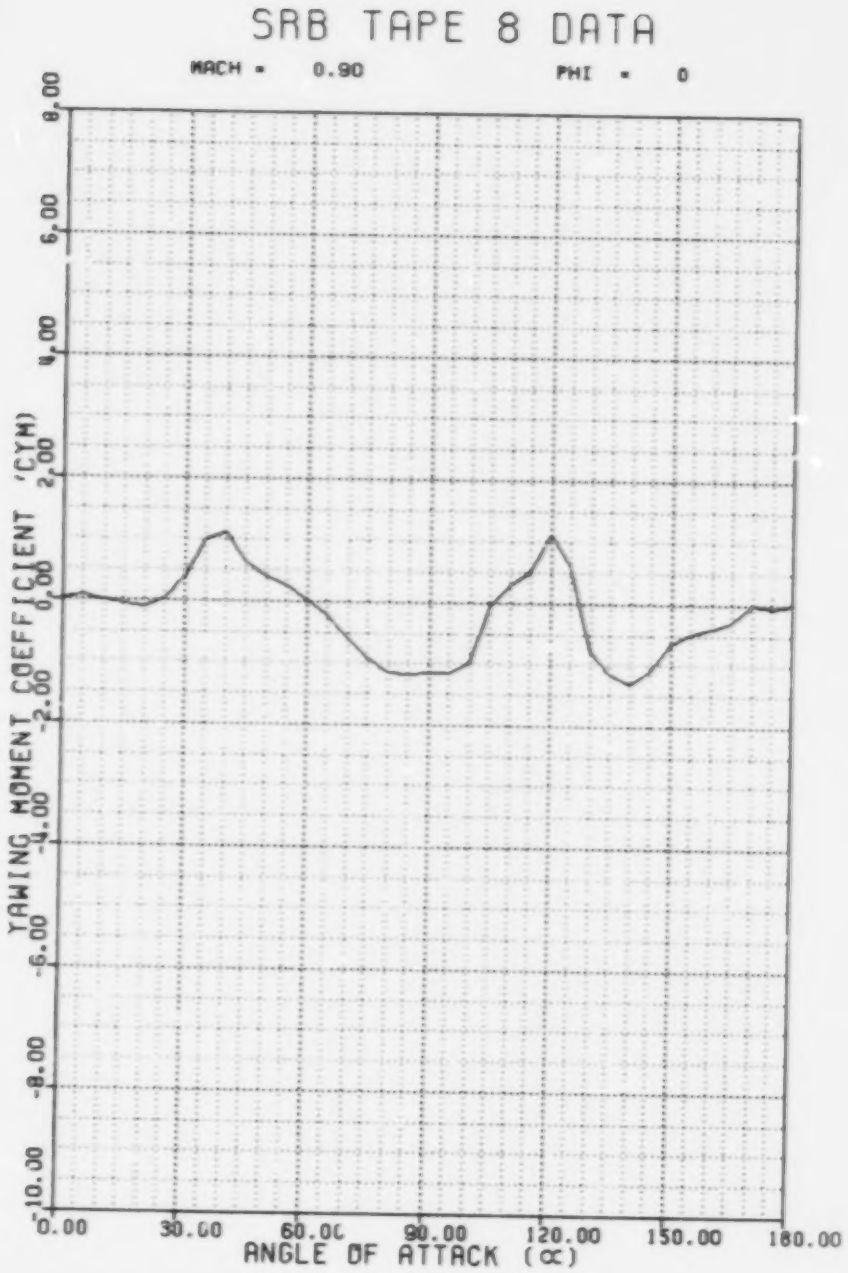
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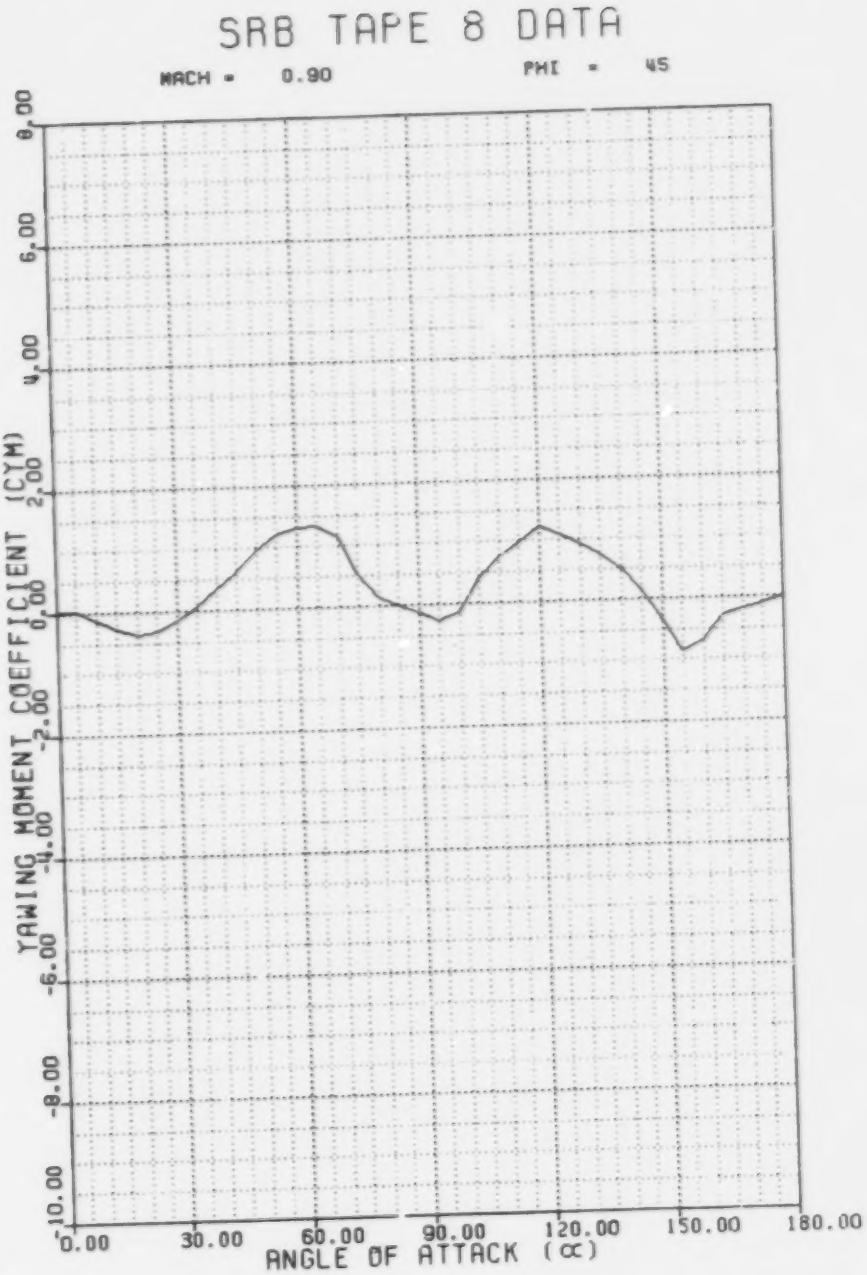
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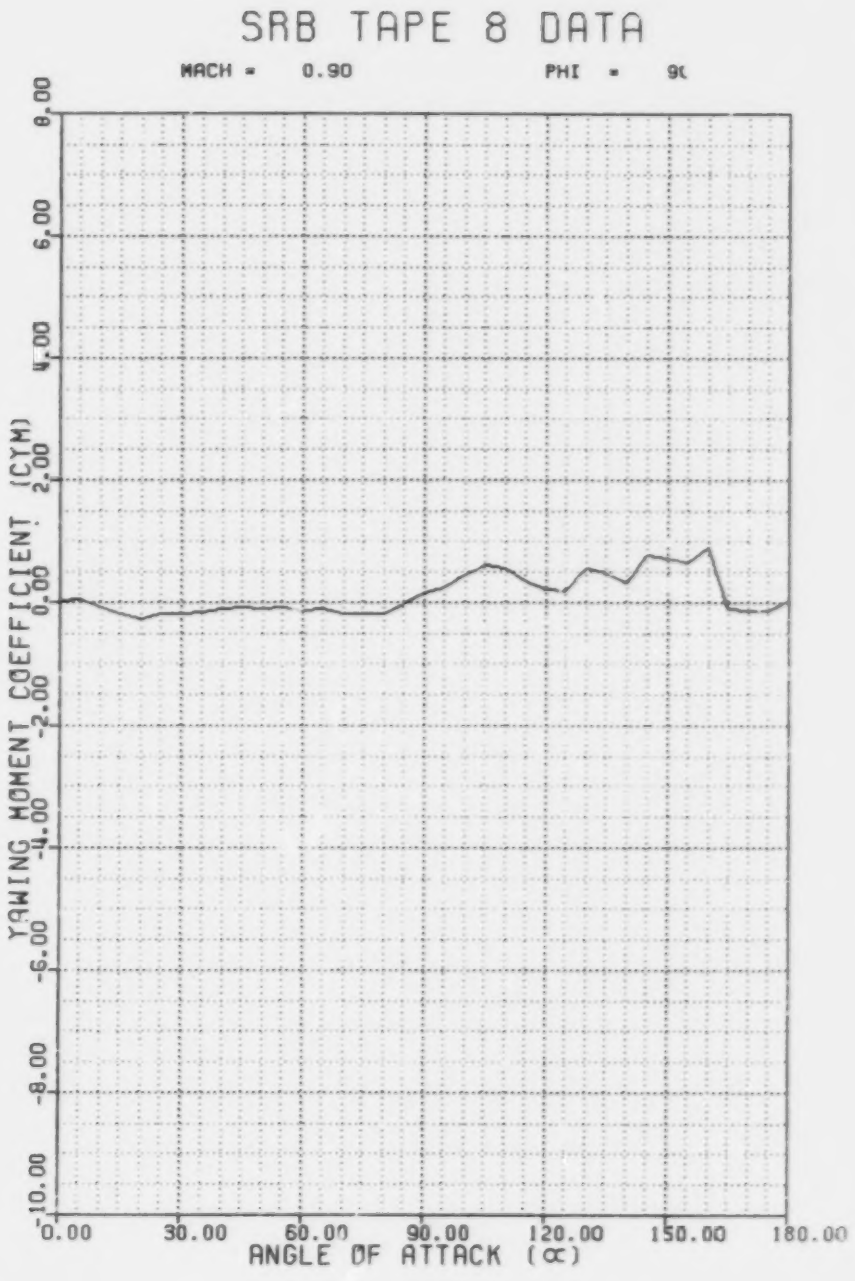
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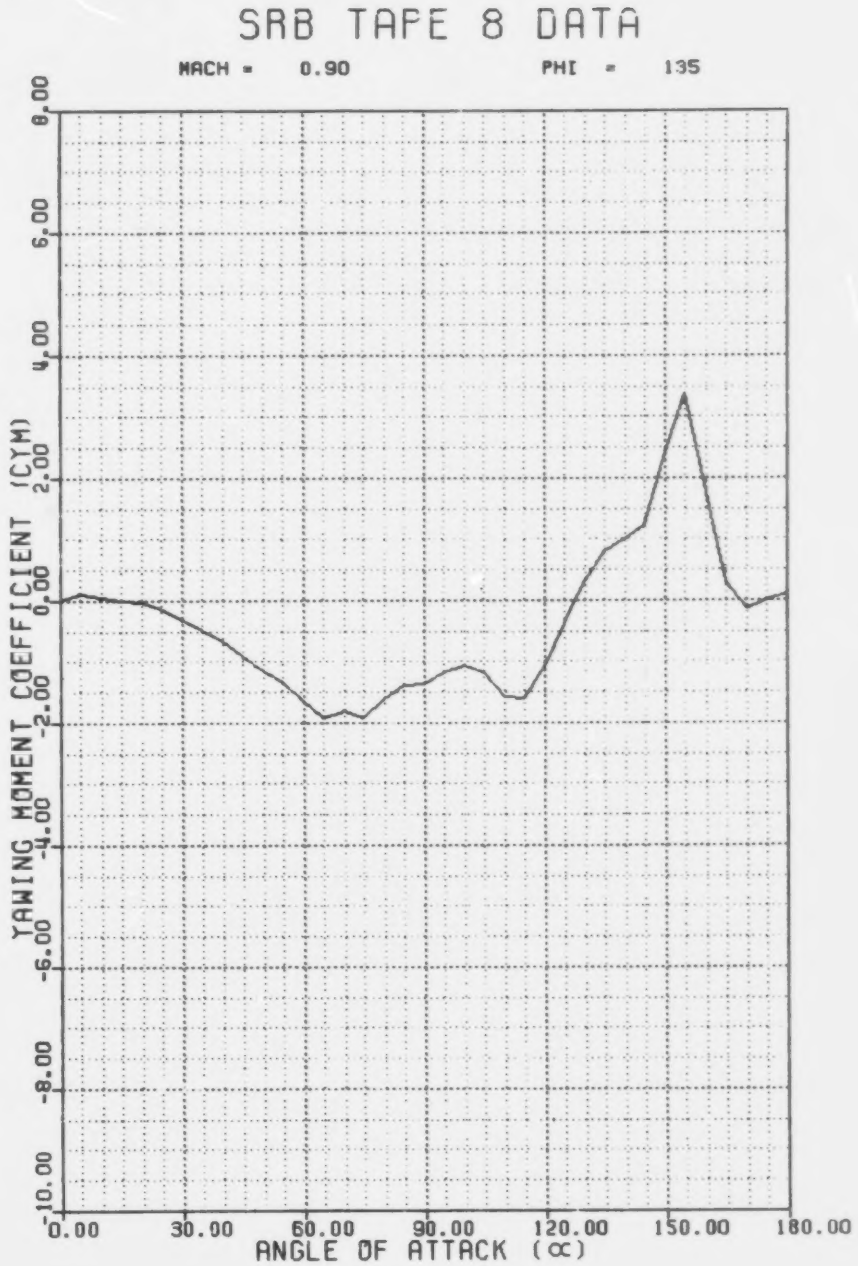
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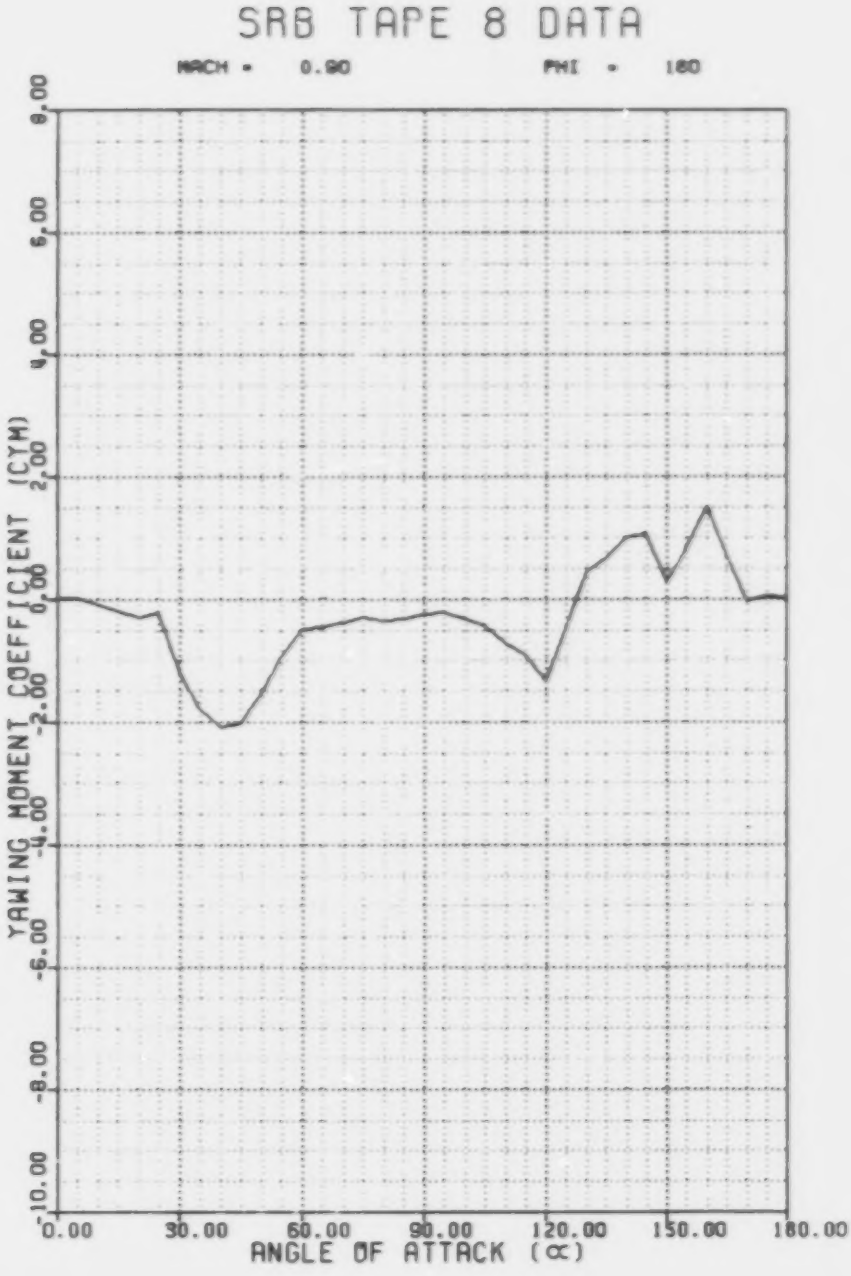
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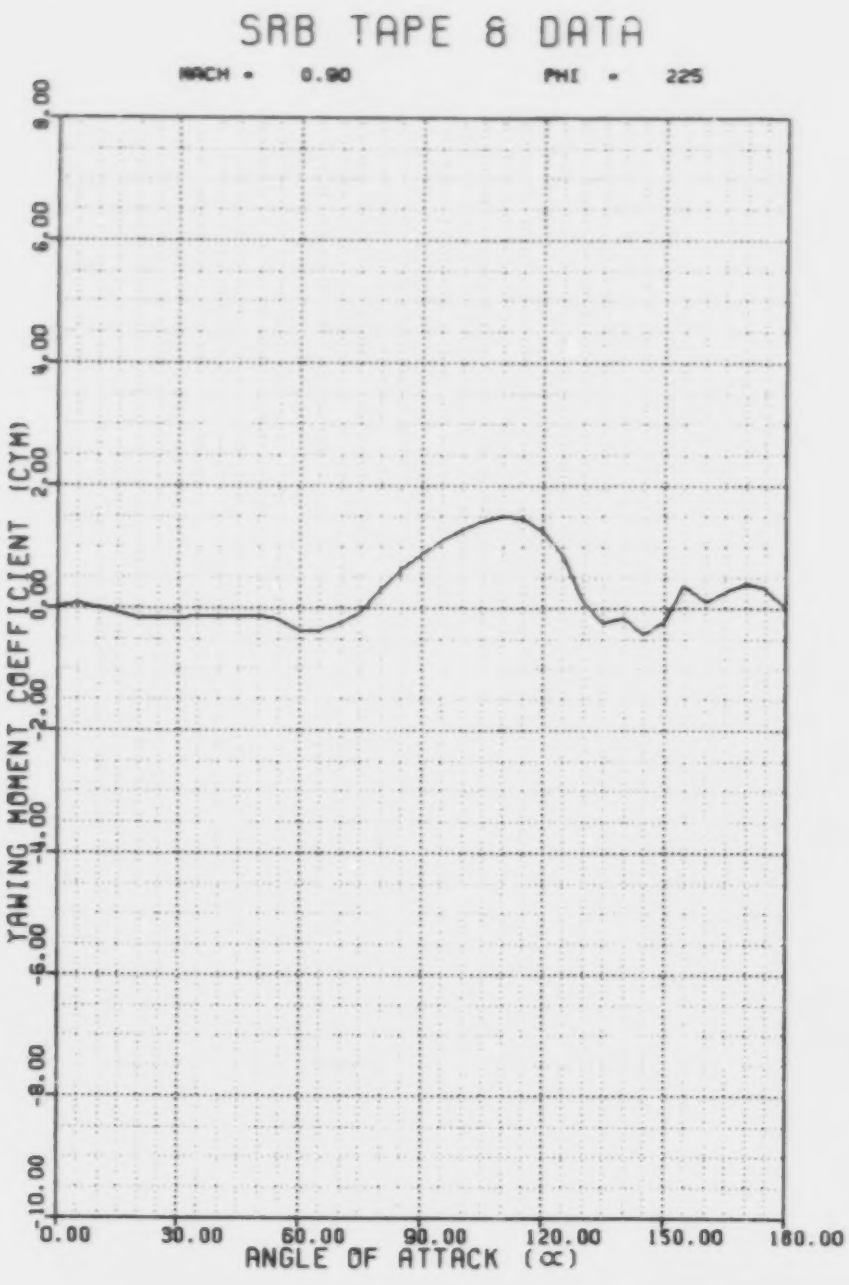
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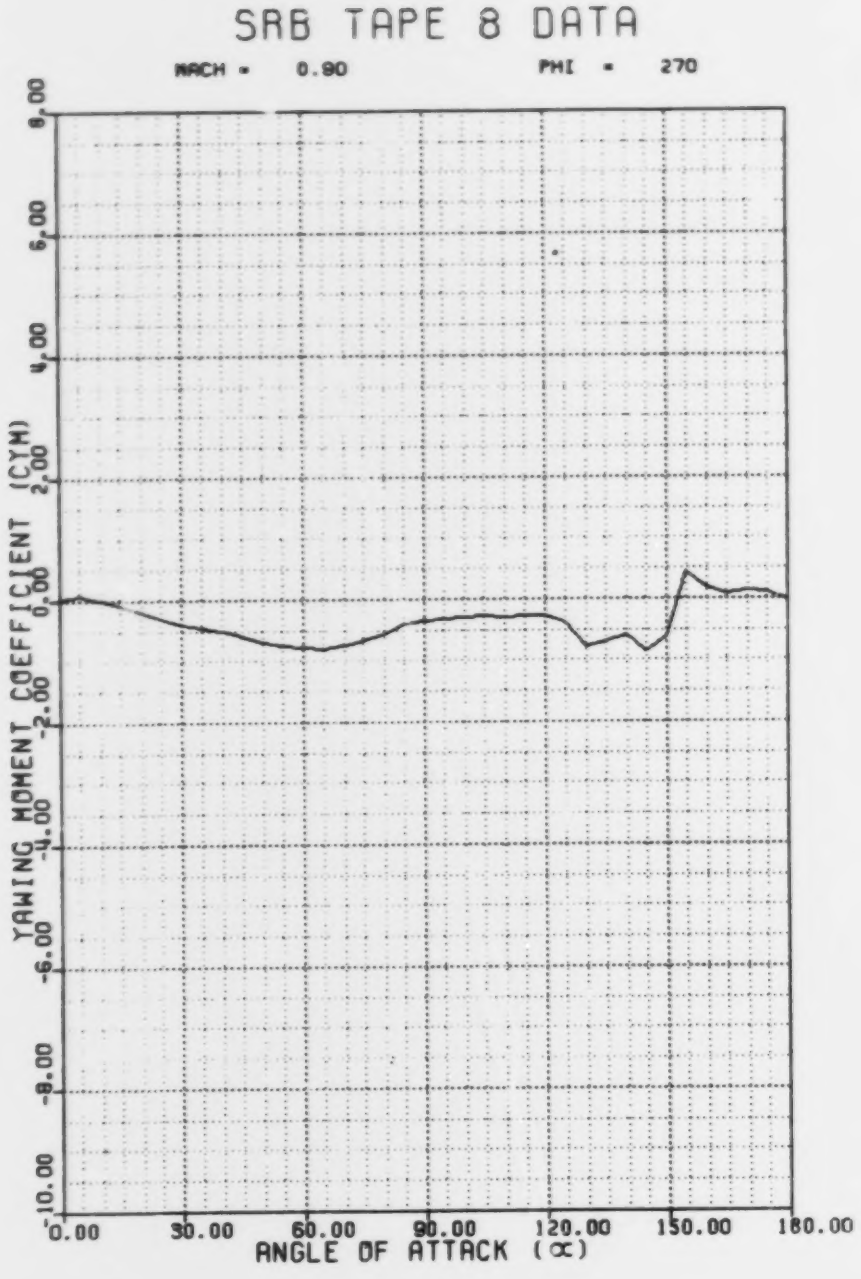
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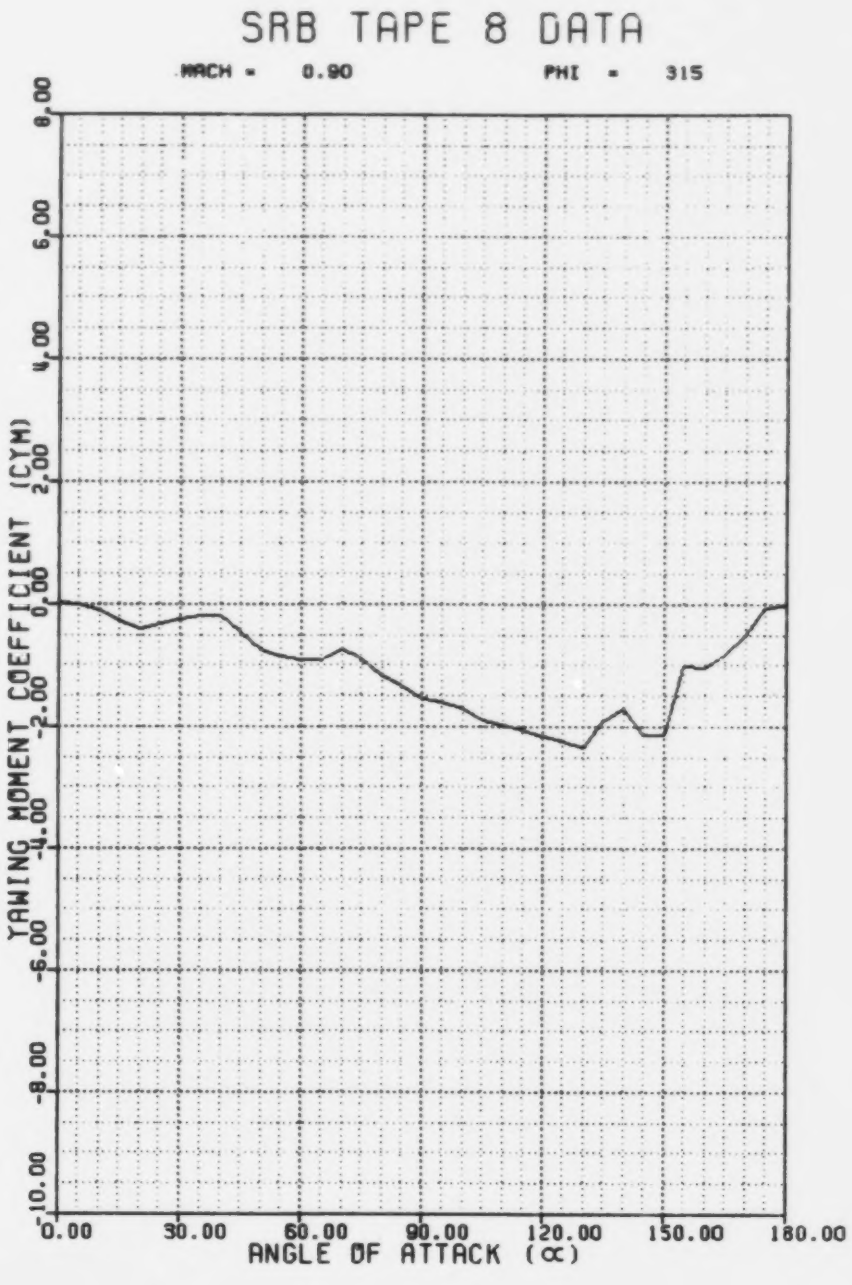
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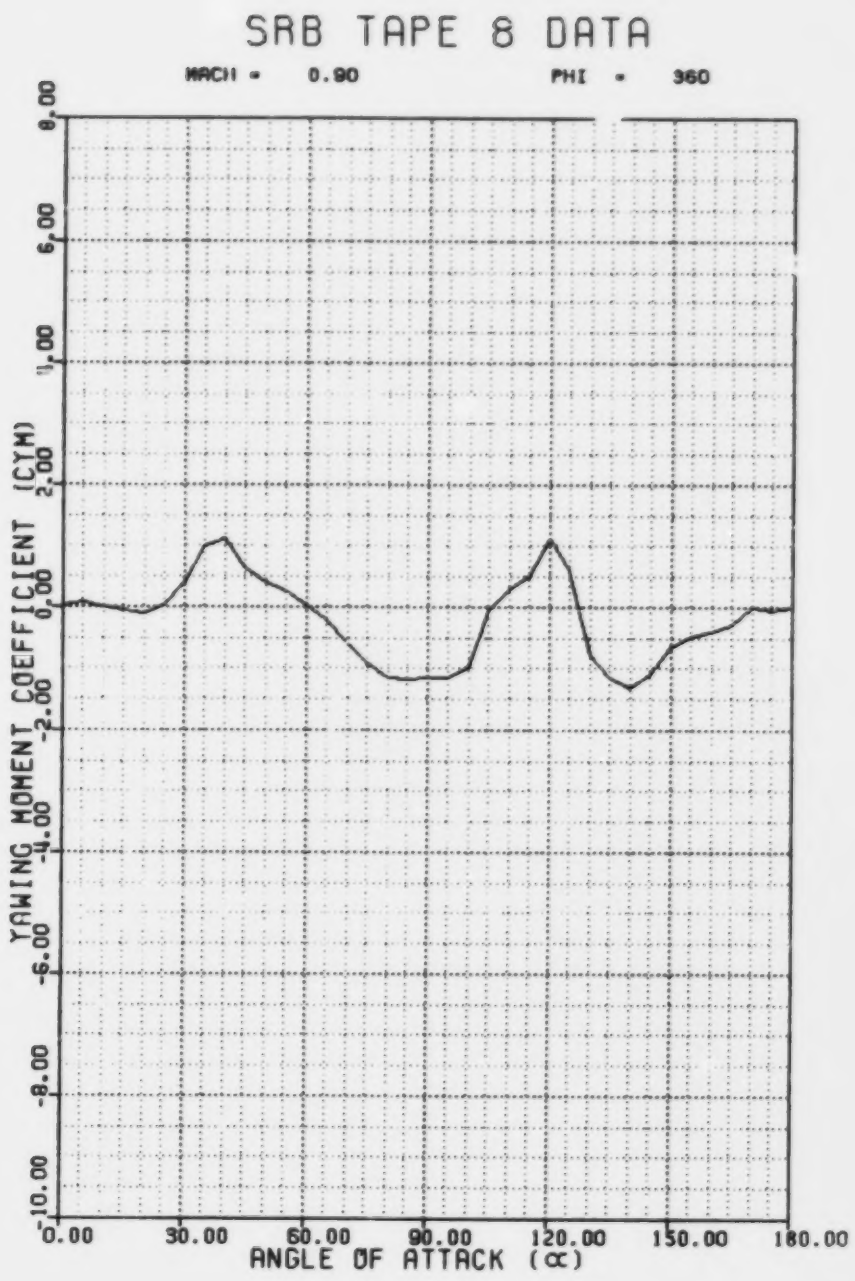
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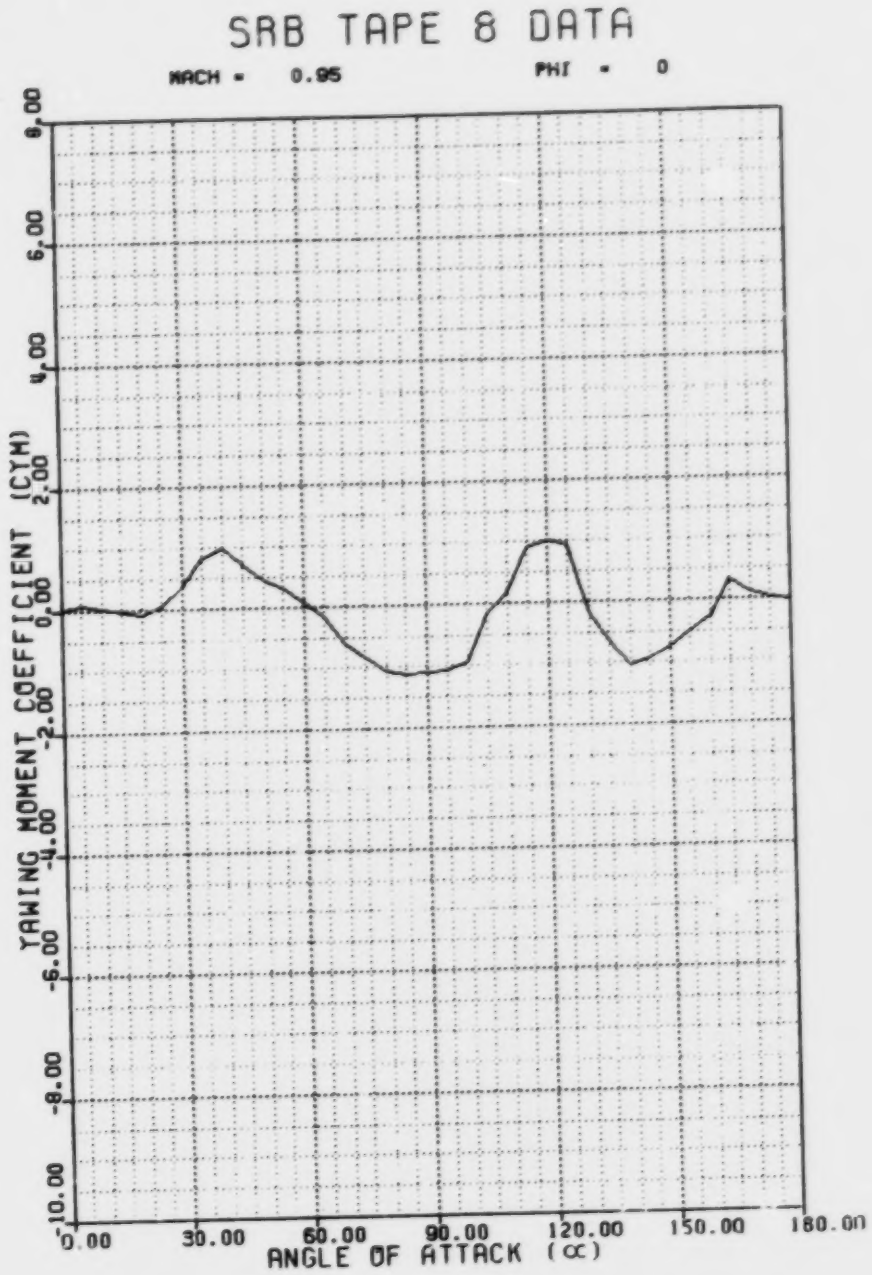
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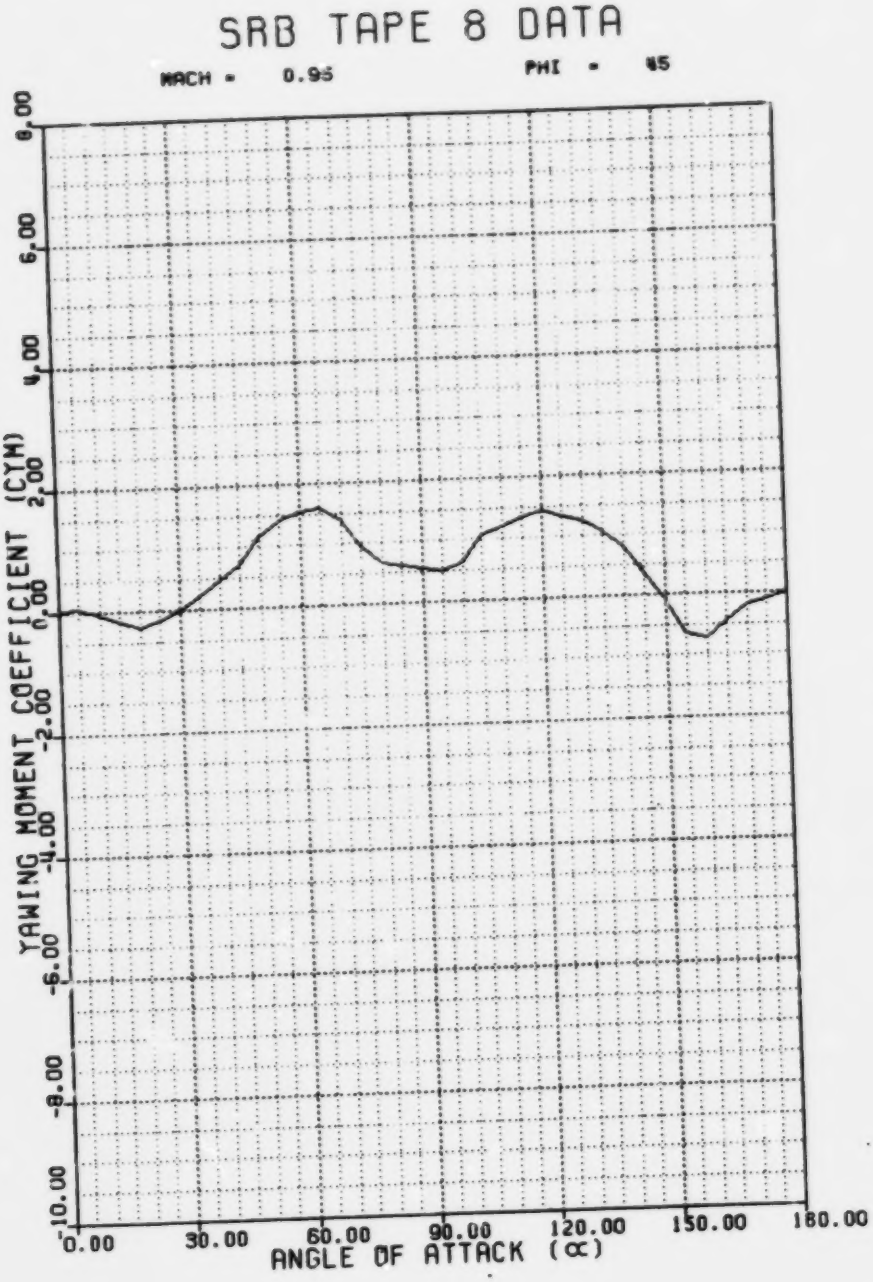
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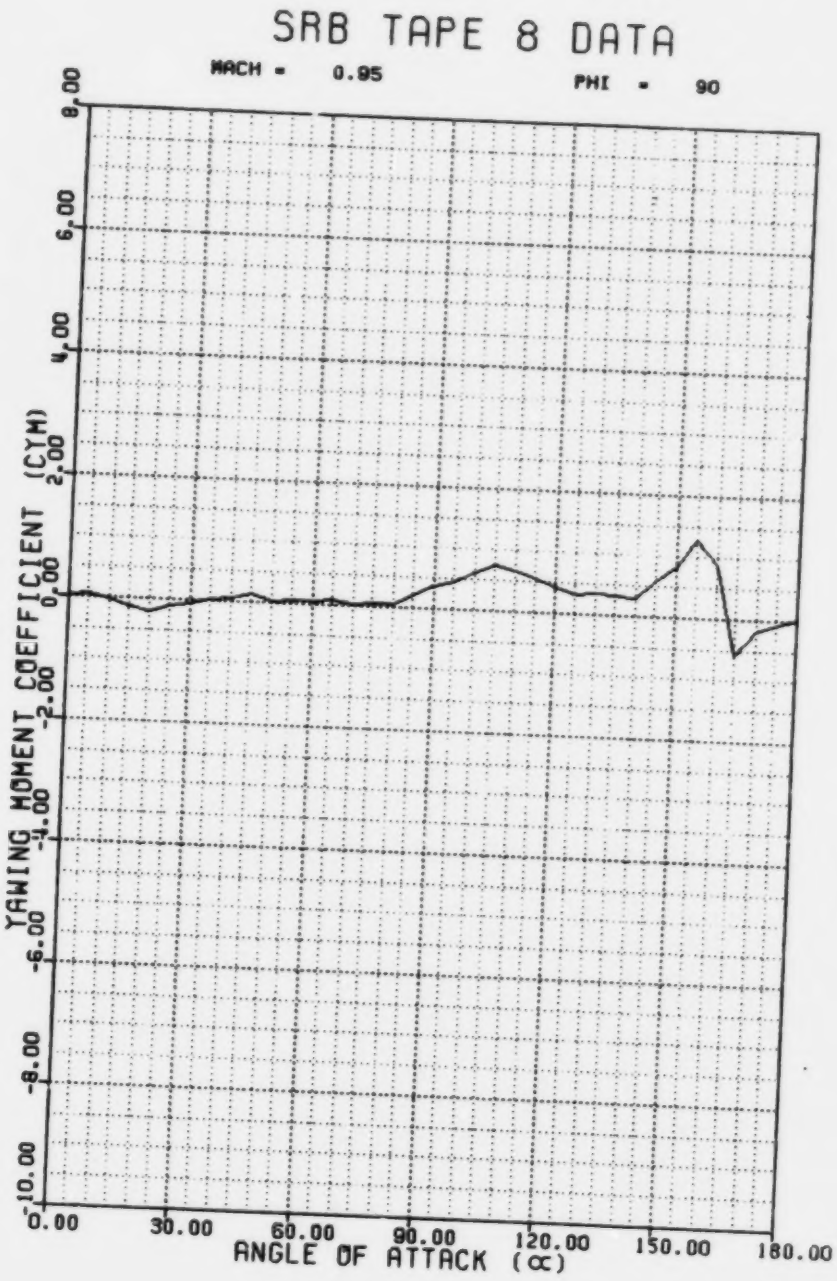
ANGLE OF ATTACK (α)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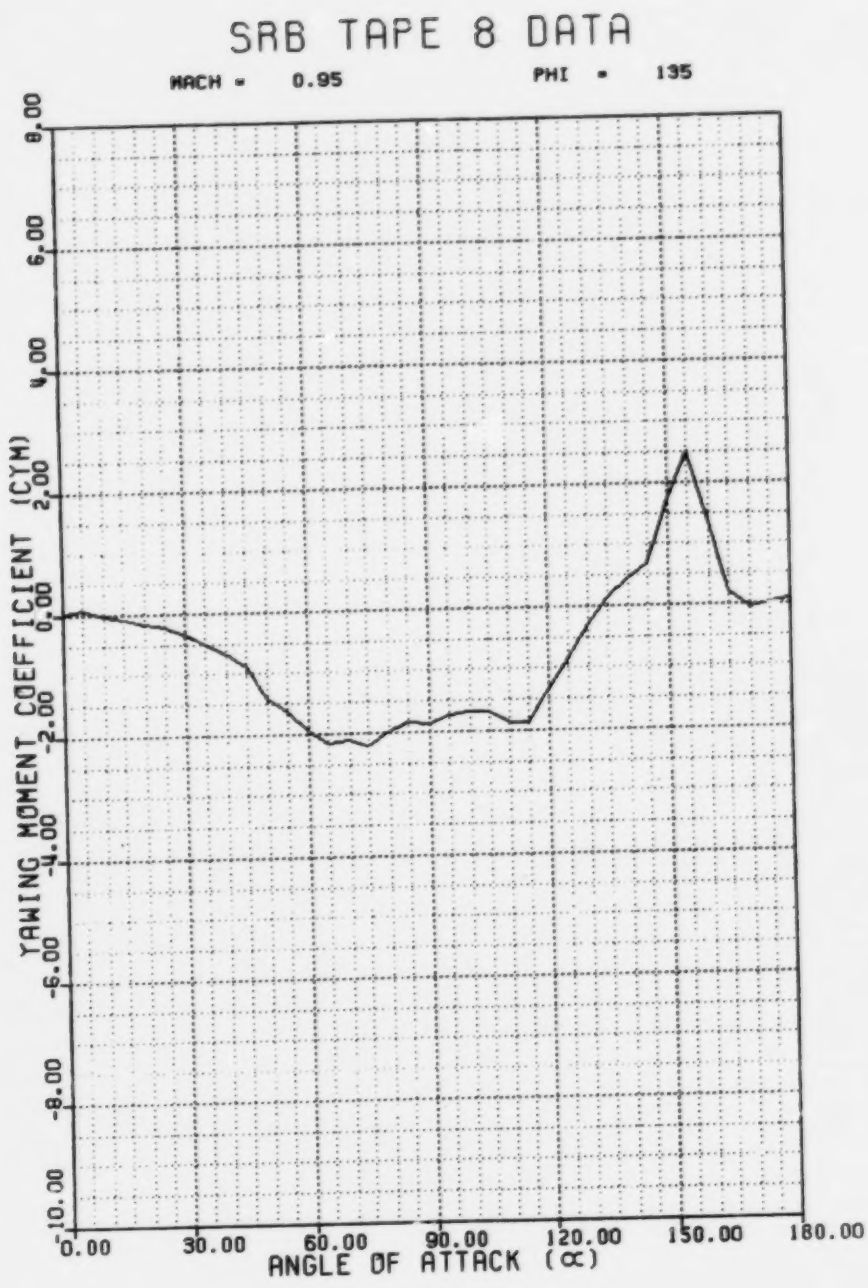
ANGLE OF ATTACK (α)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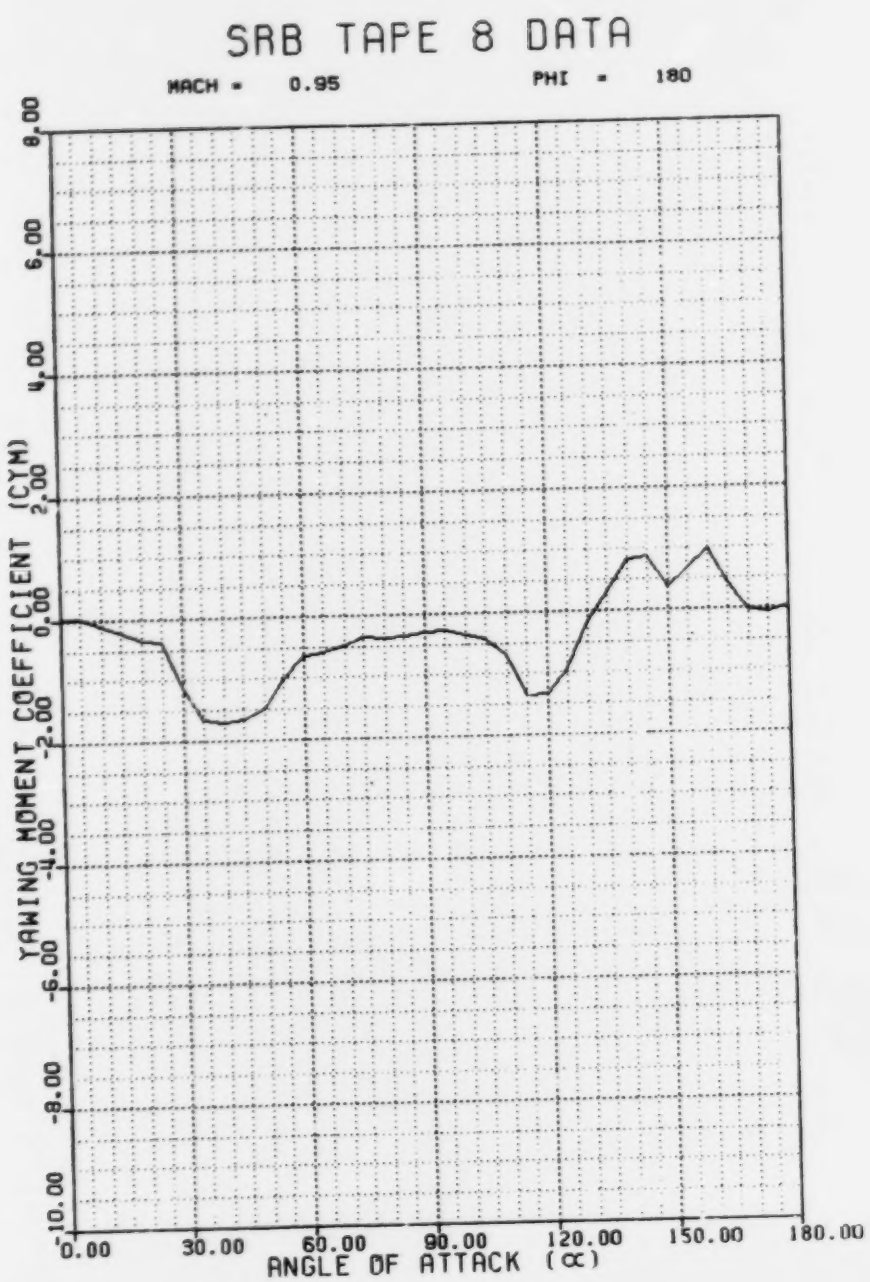
ANGLE OF ATTACK (α)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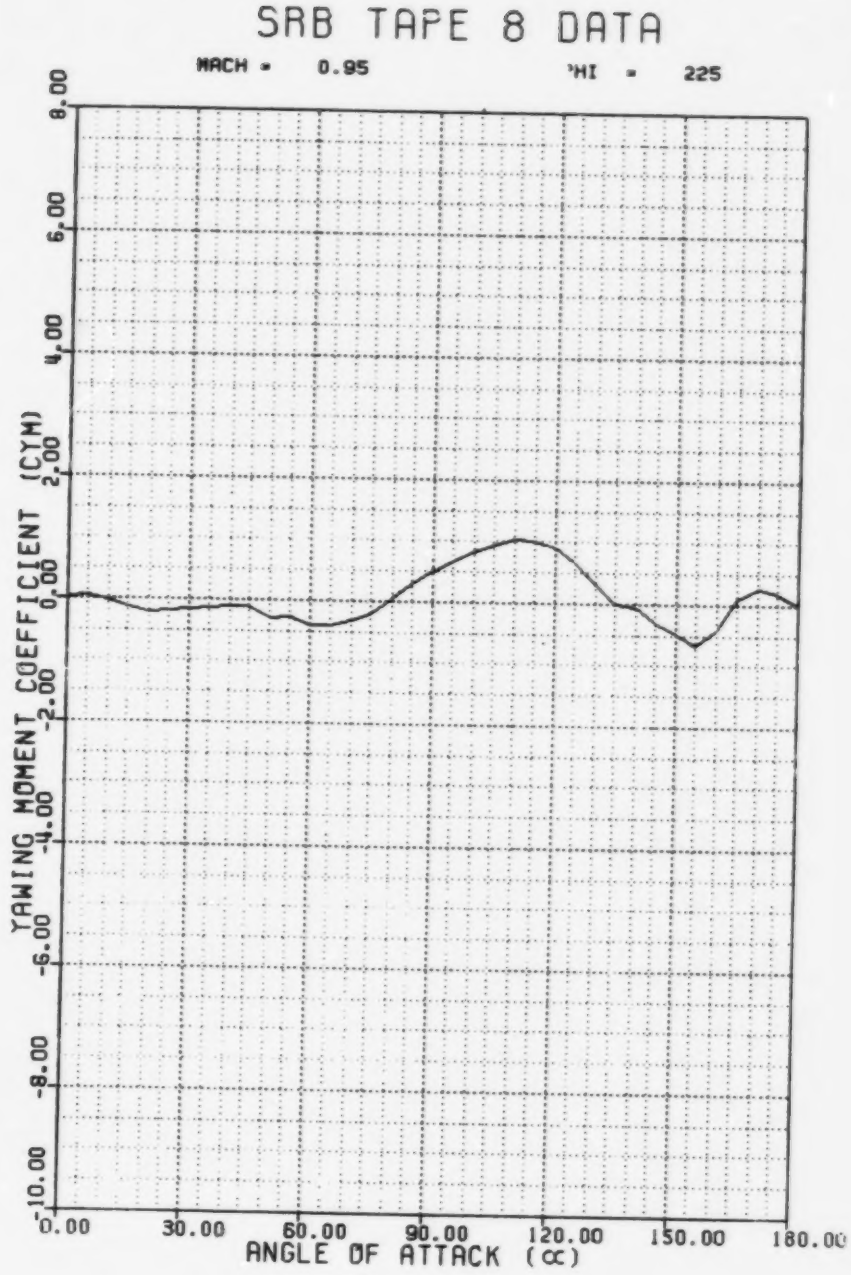
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4.00
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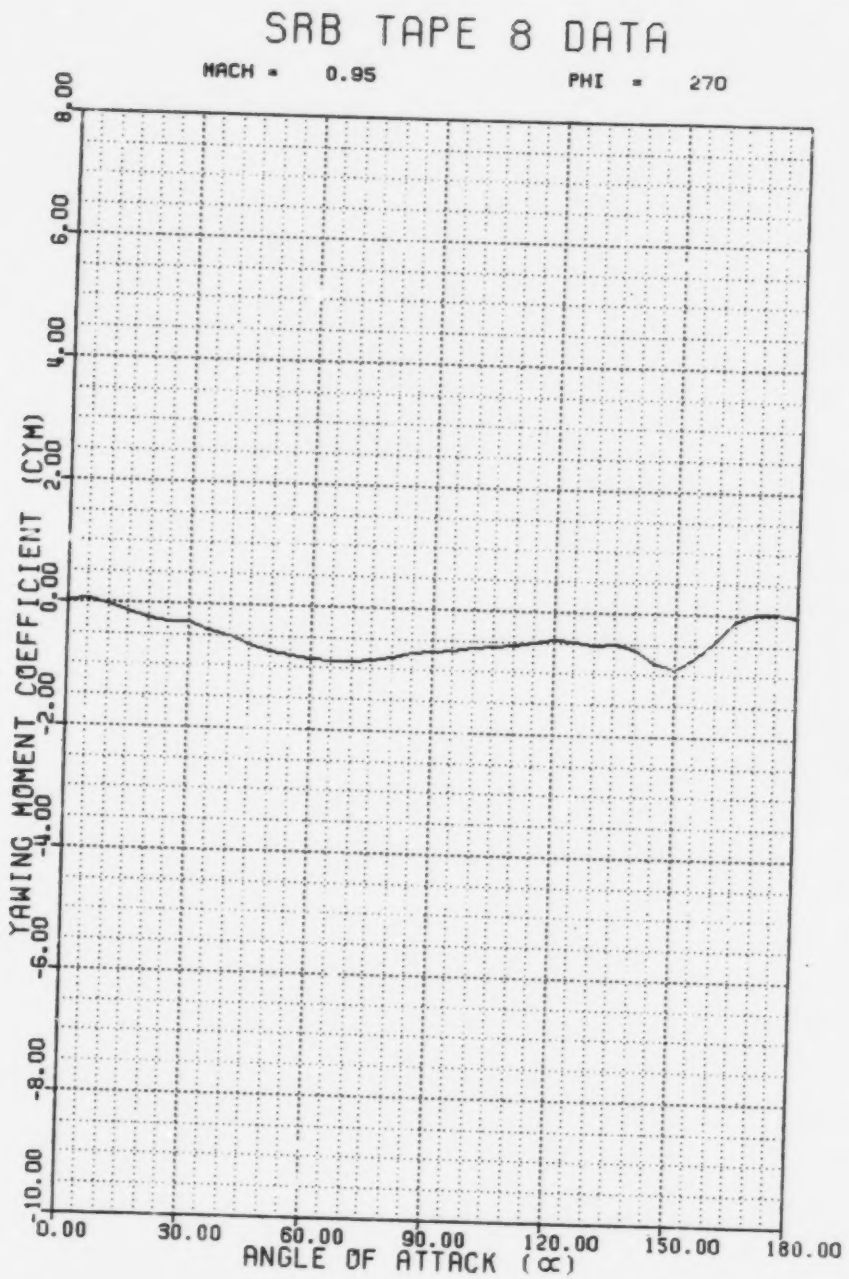
180.00
ANGLE OF ATTACK (α)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-4.00
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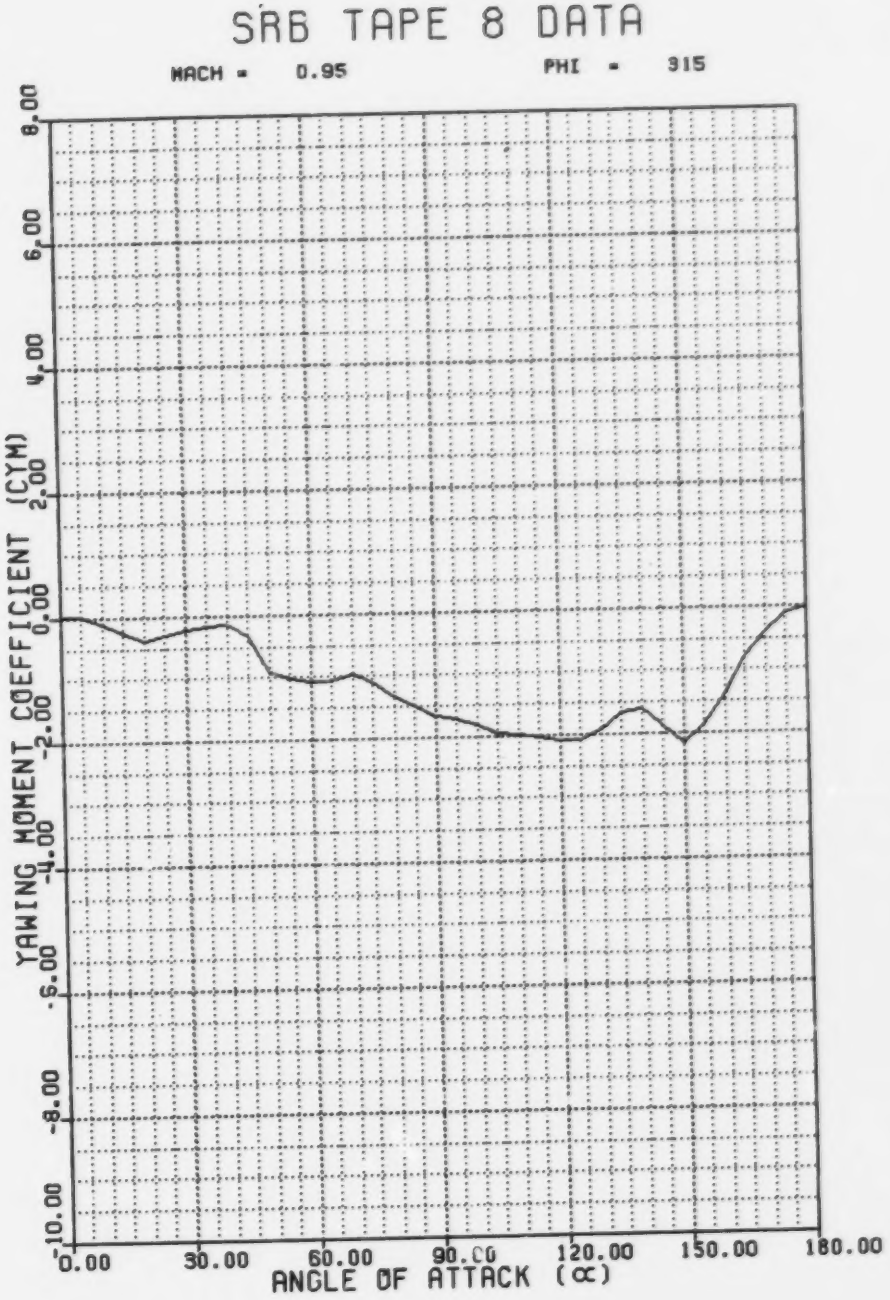
ANGLE OF ATTACK (α)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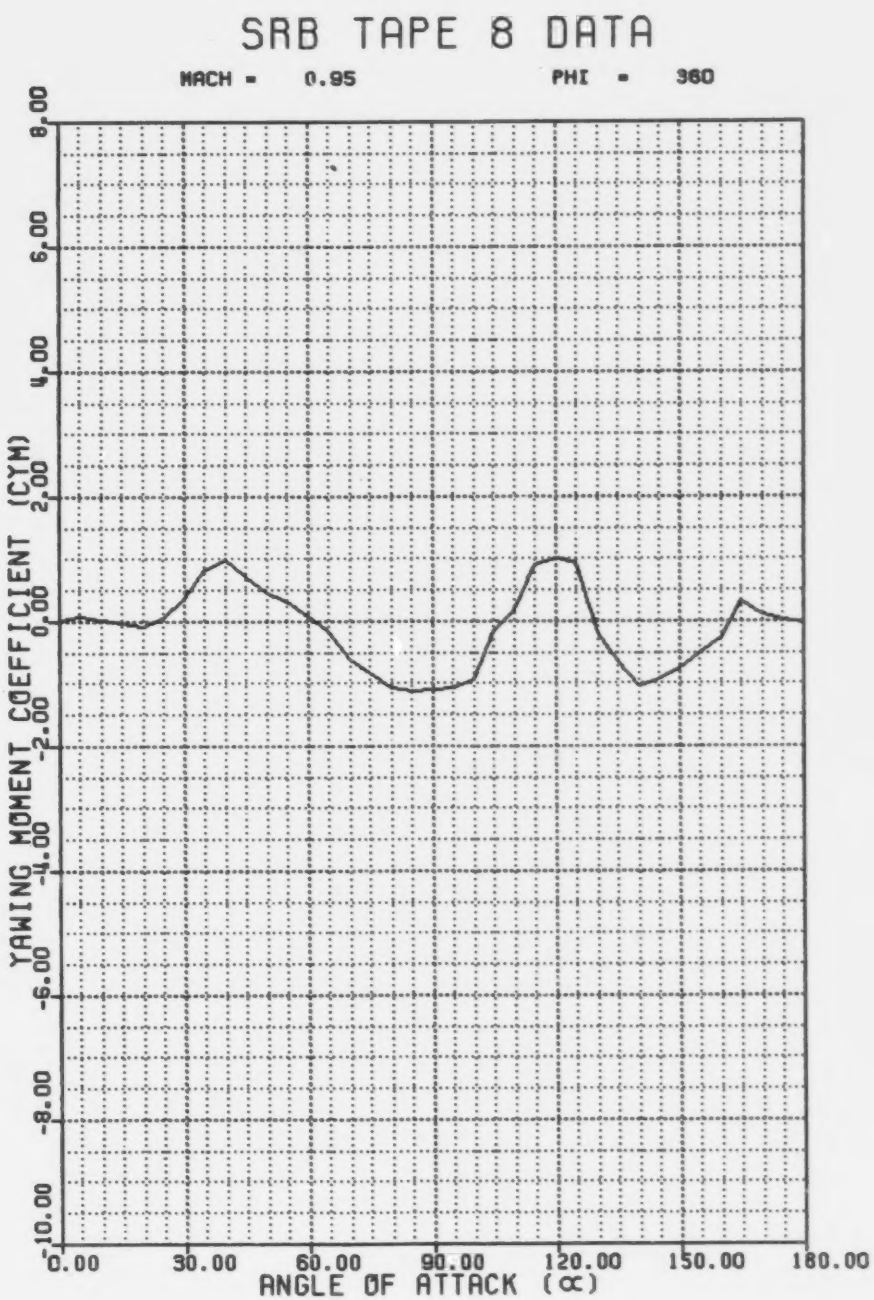
ANGLE OF ATTACK (α)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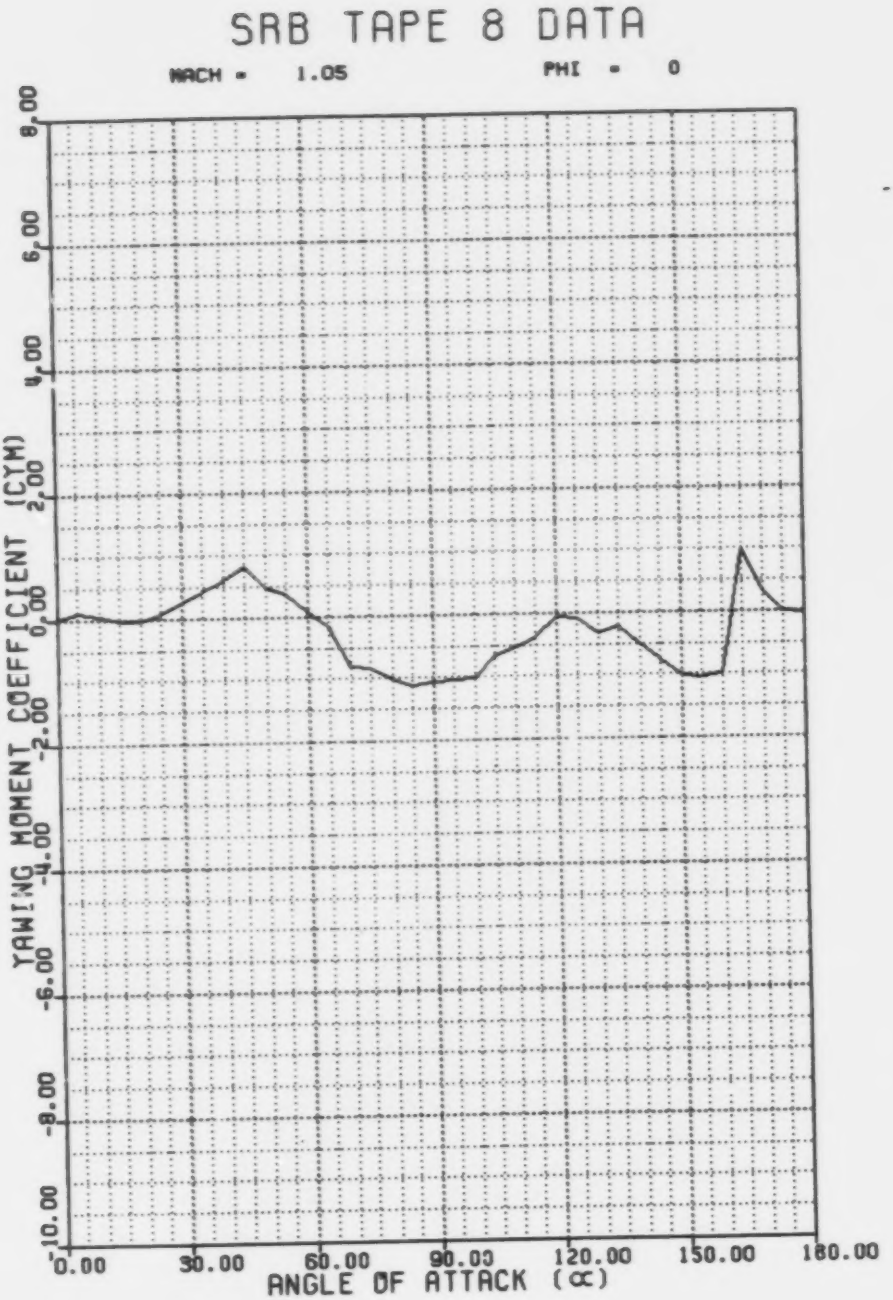
ANGLE OF ATTACK (α)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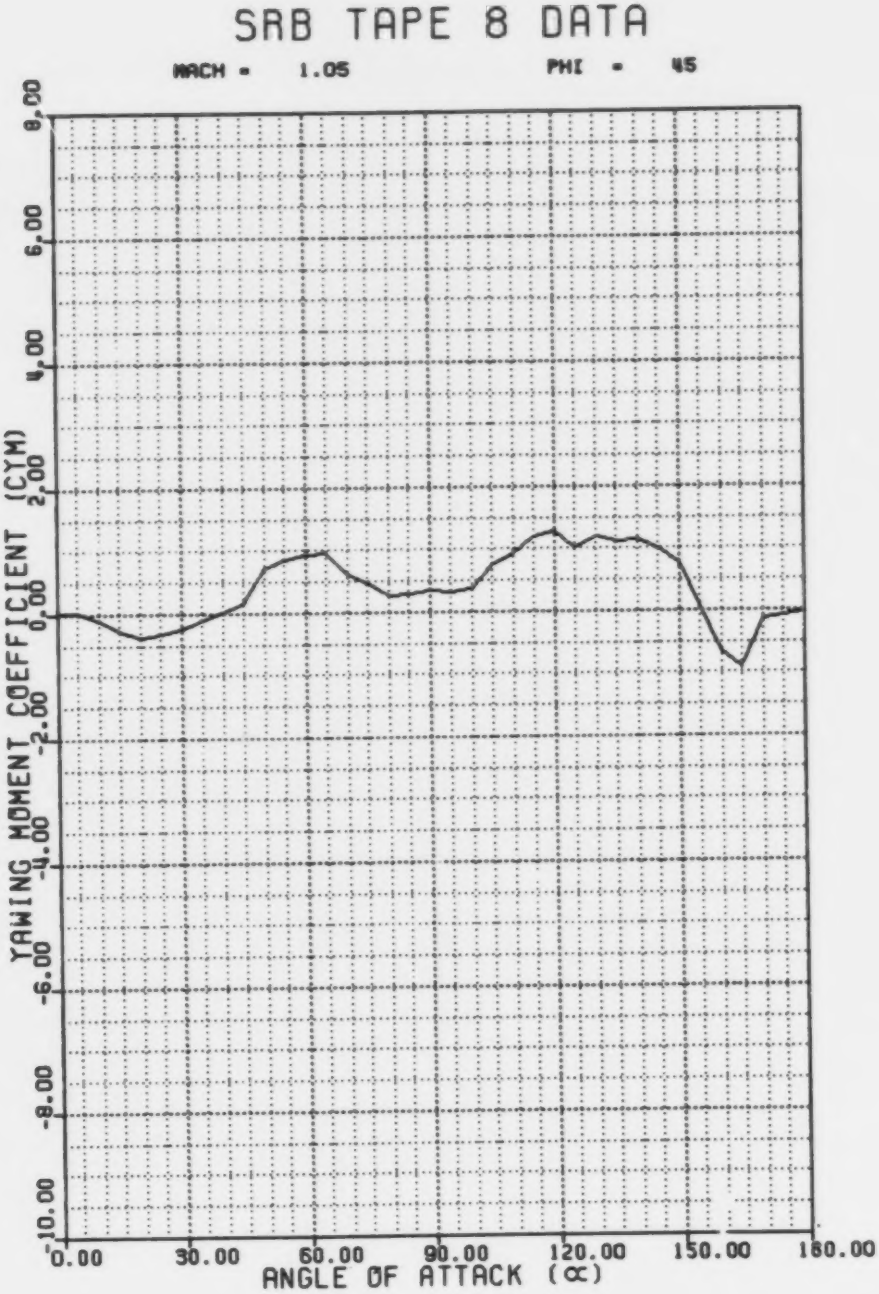
ANGLE OF ATTACK (α)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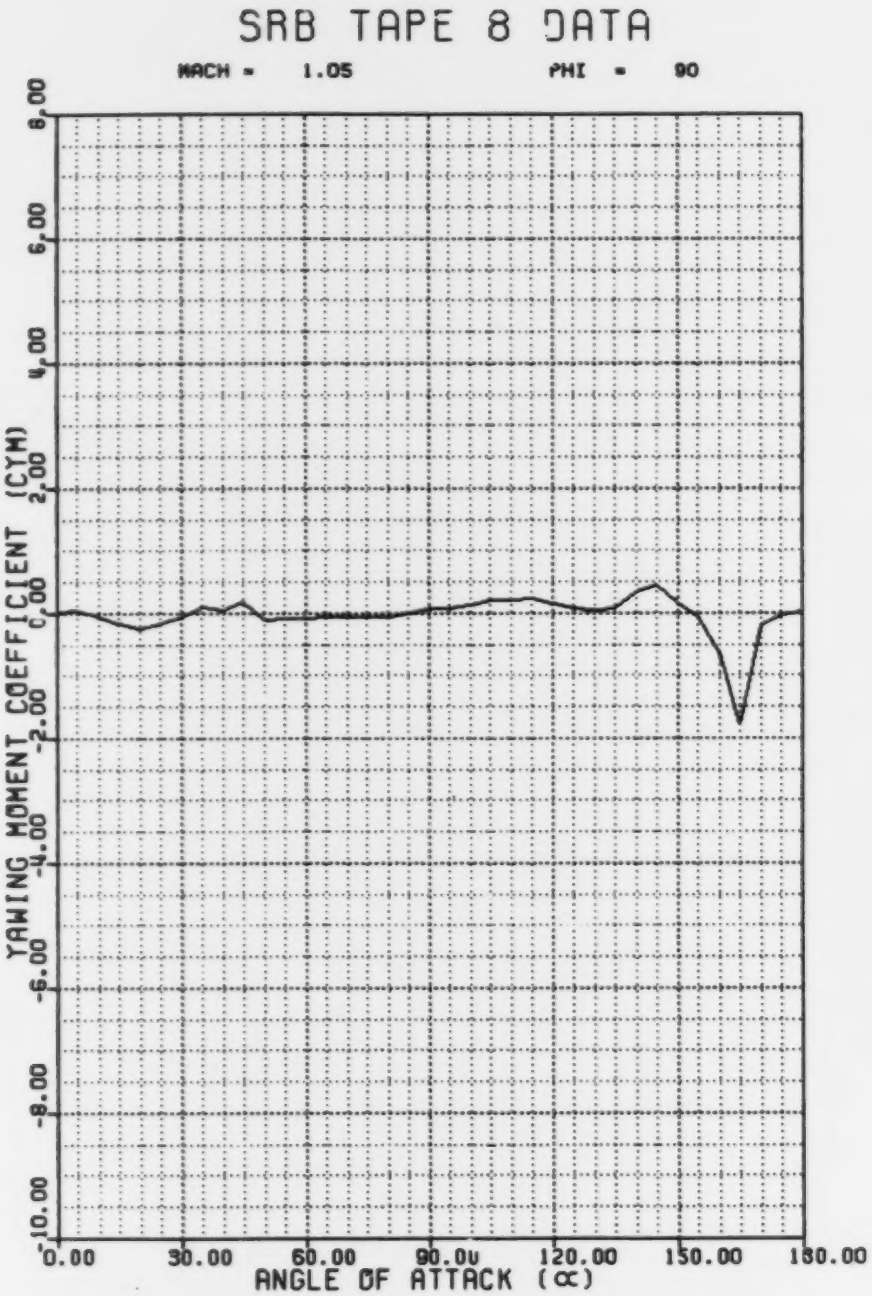
ANGLE OF ATTACK (α)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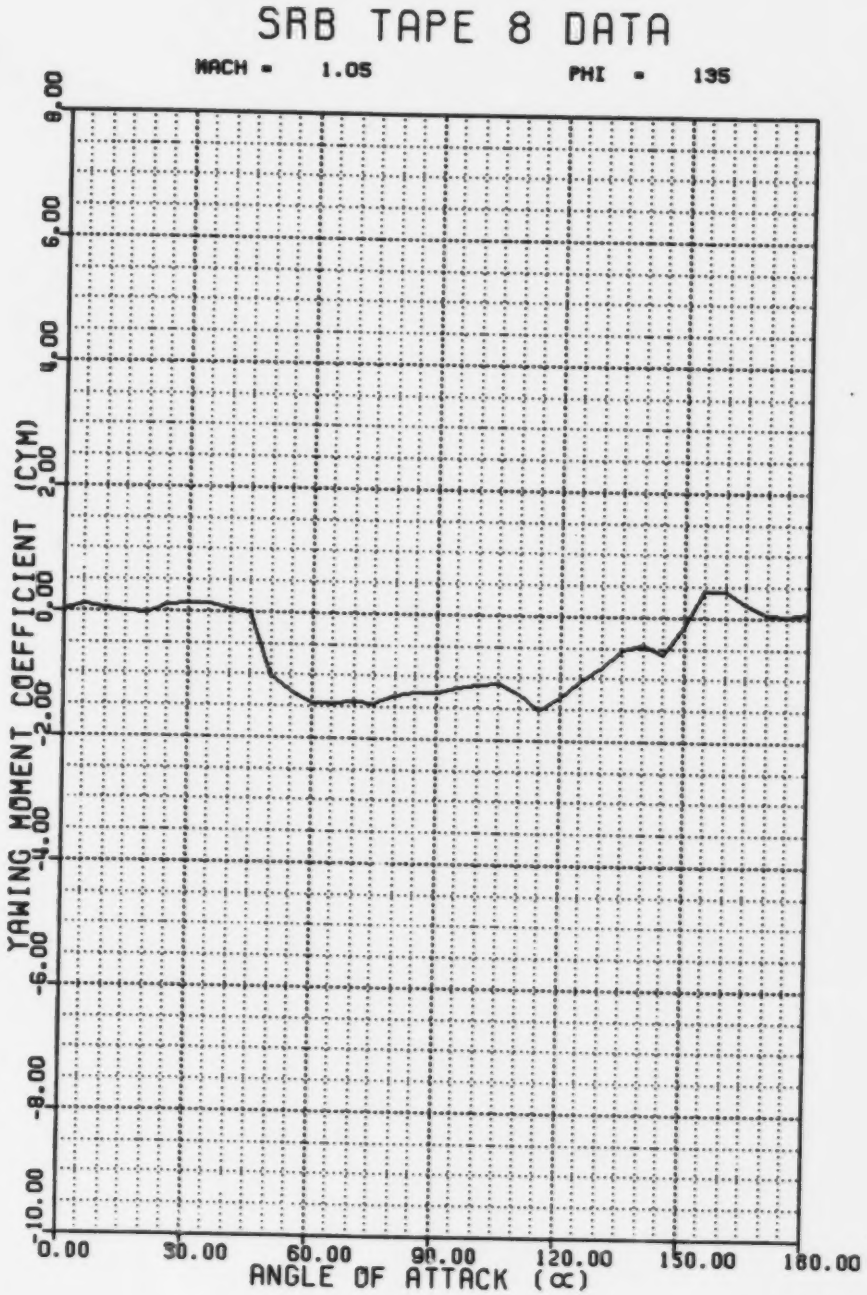
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 135
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-4.00
-6.00
-8.00
-10.00
0.00
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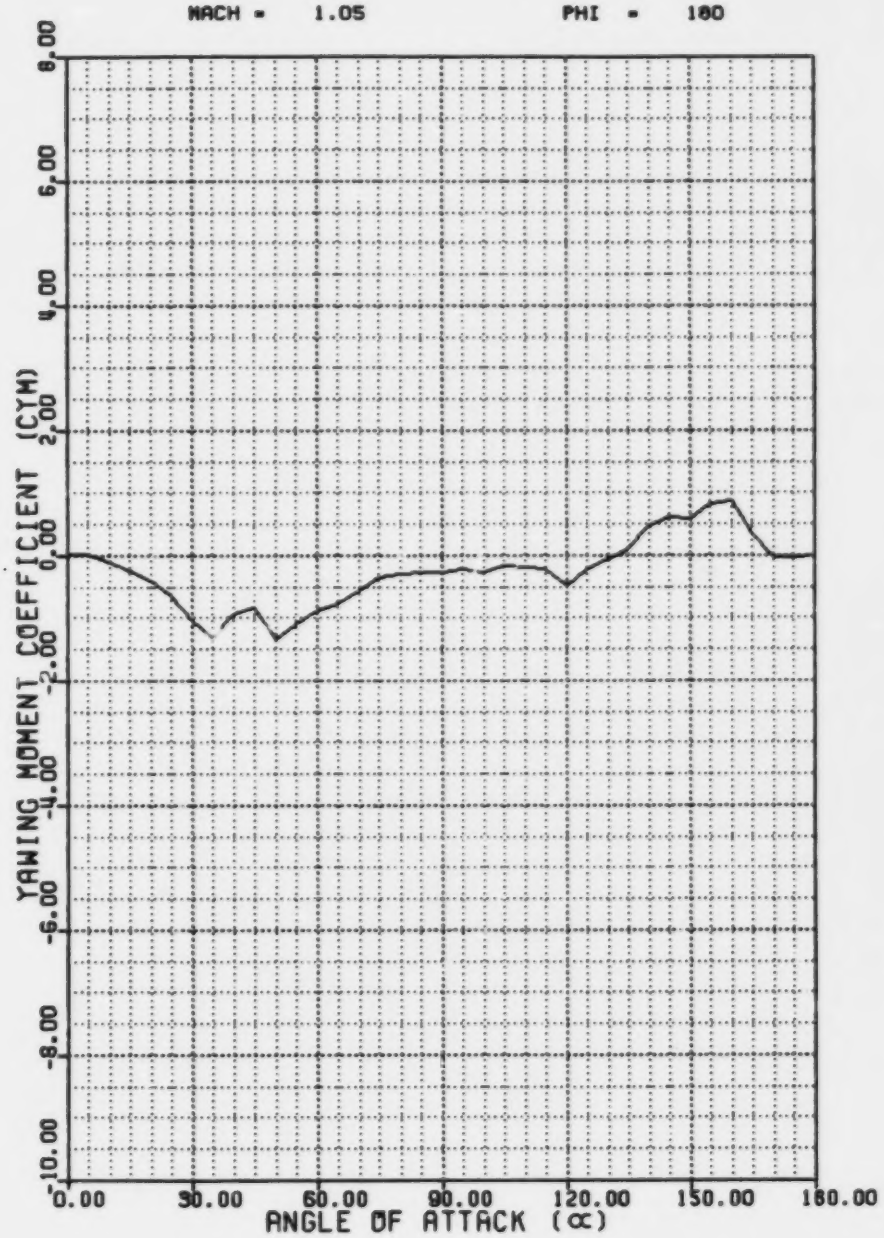
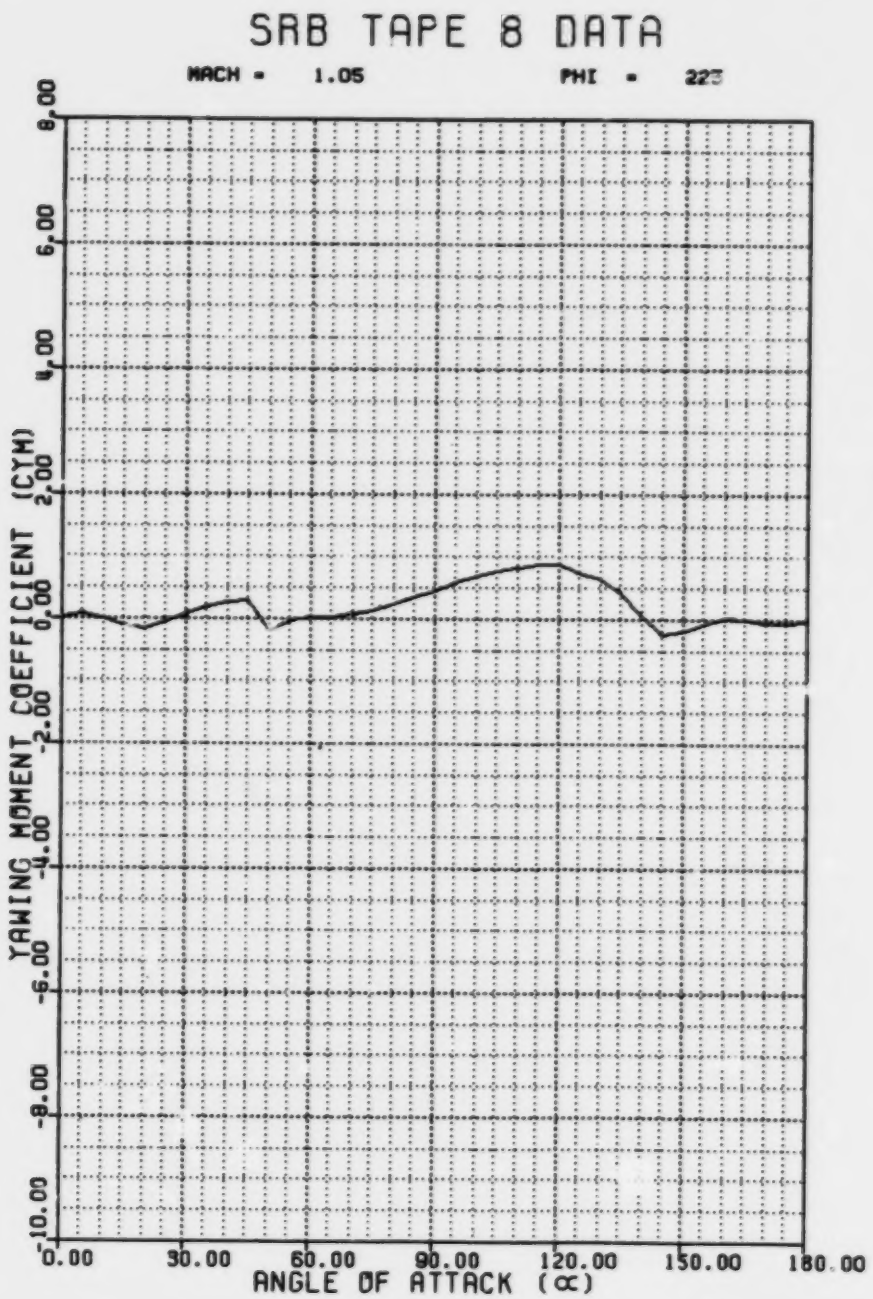
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.05 PHI = 180

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MACH = 1.05
PHI = 223
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0.00
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60.00
90.00
120.00
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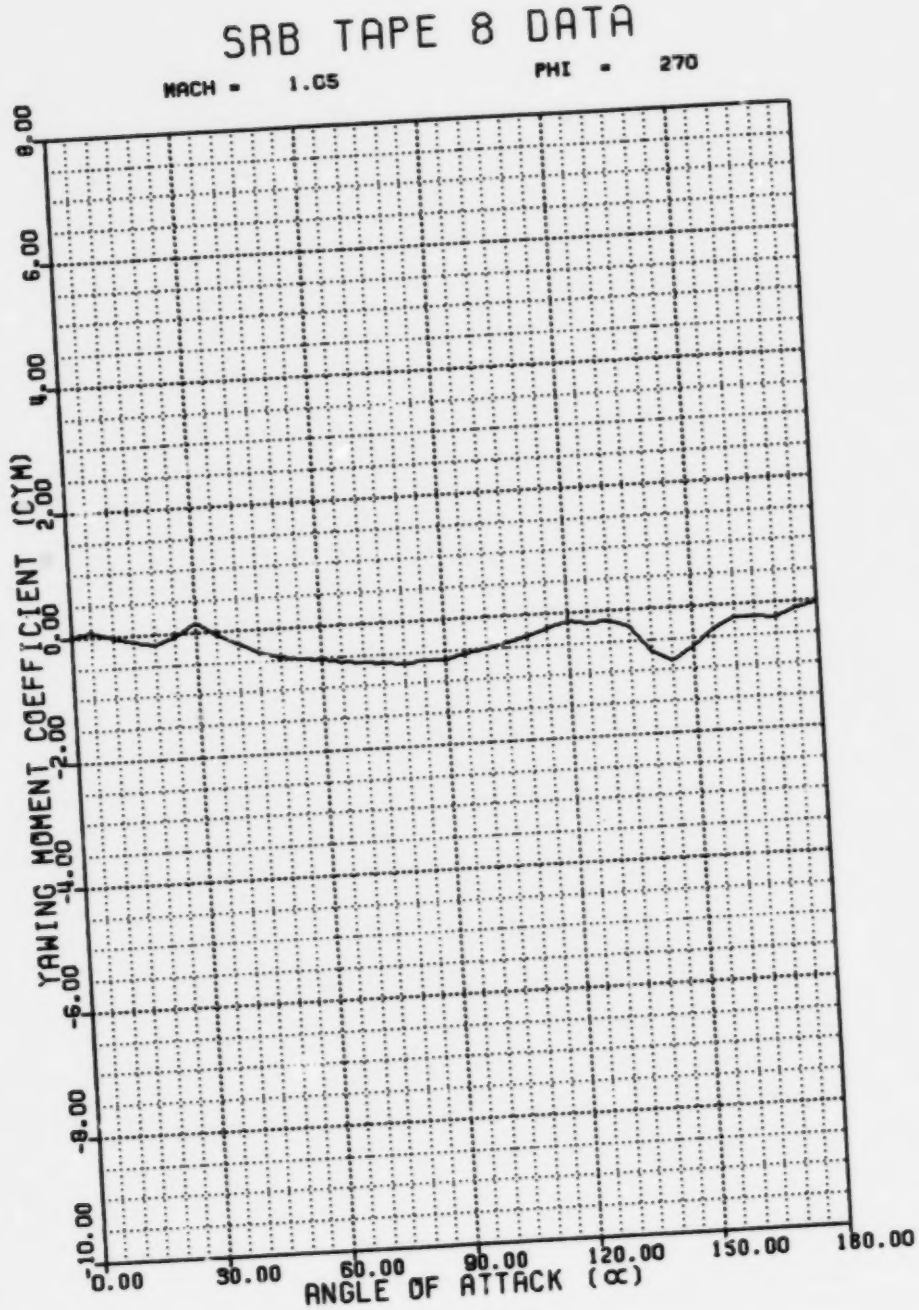
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 270
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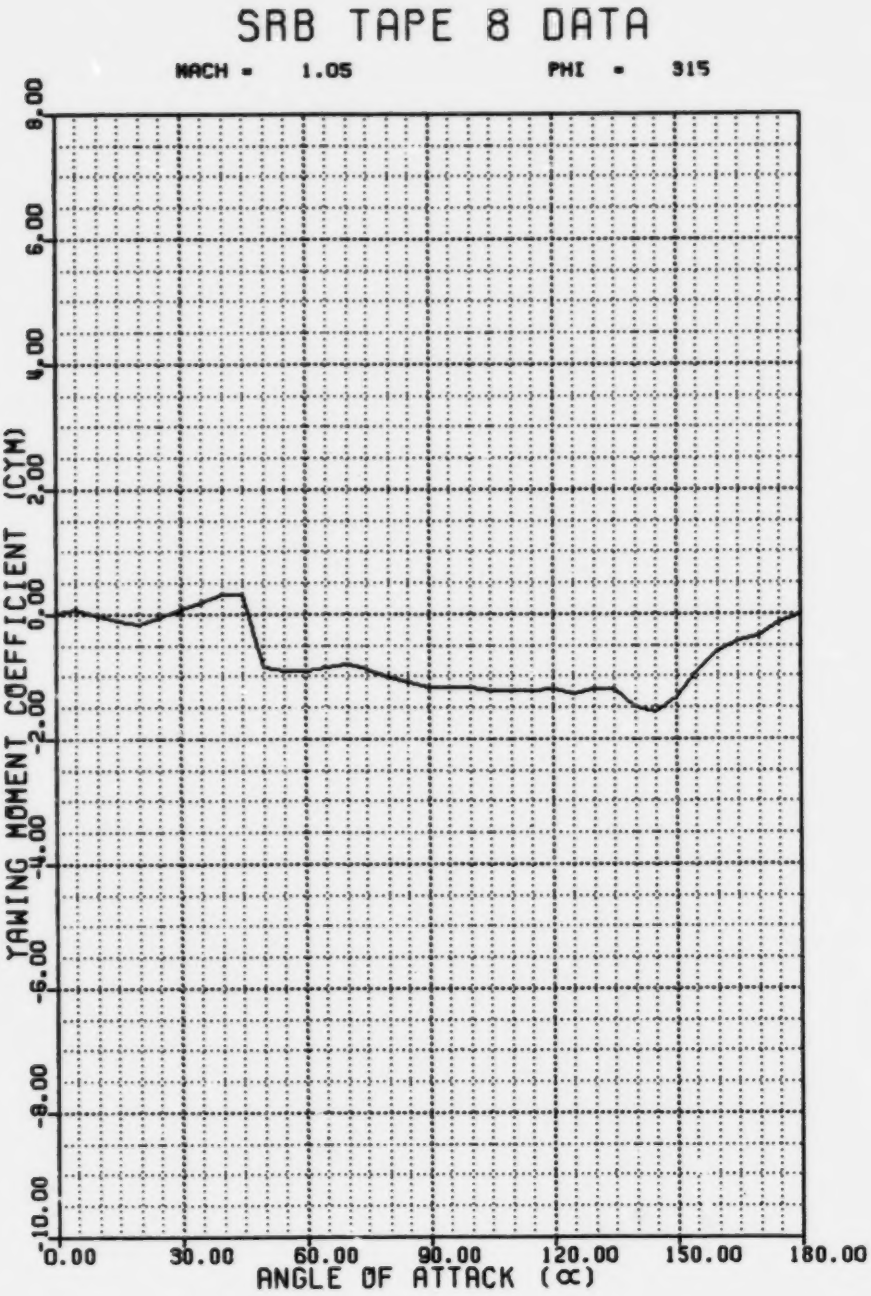
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 315
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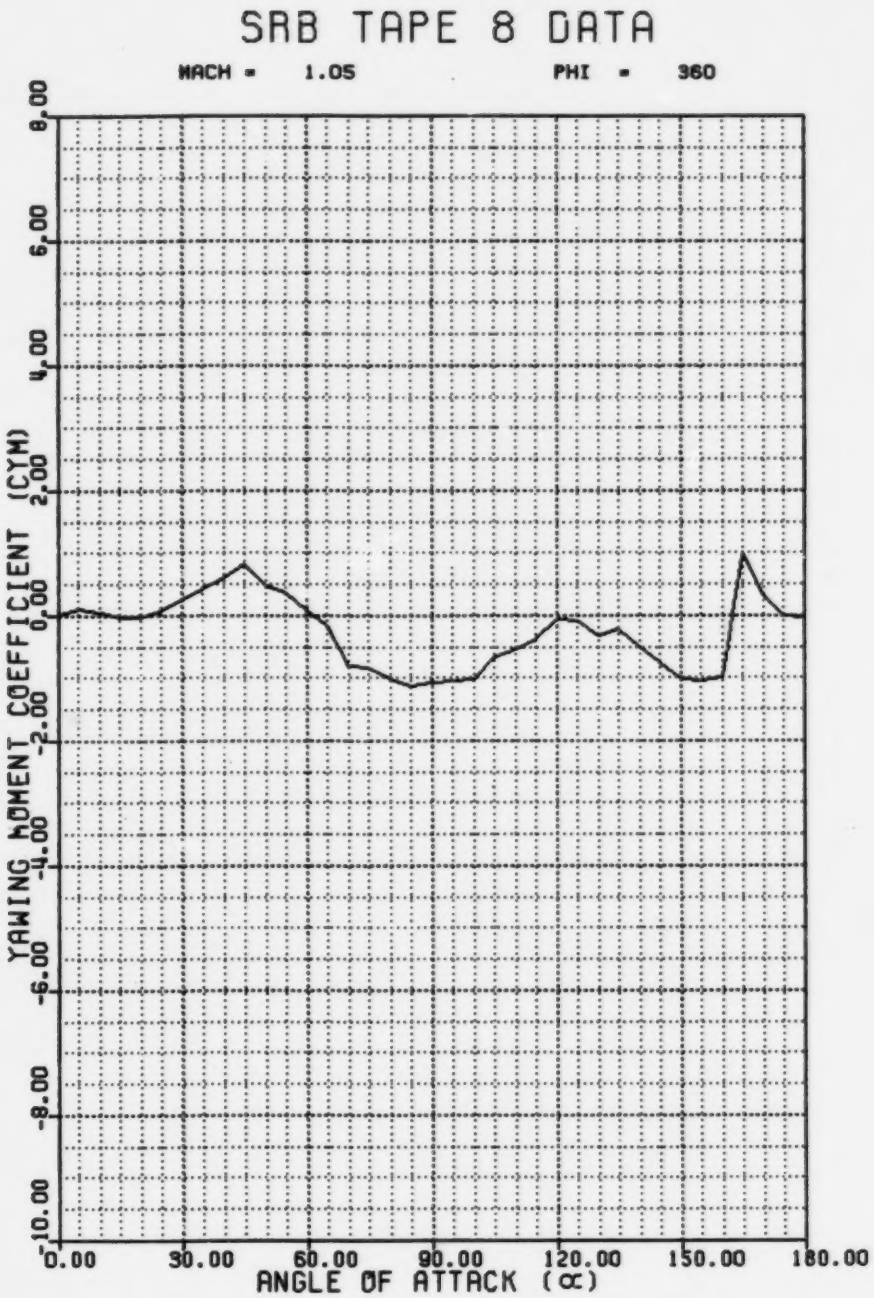
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 360
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2.00
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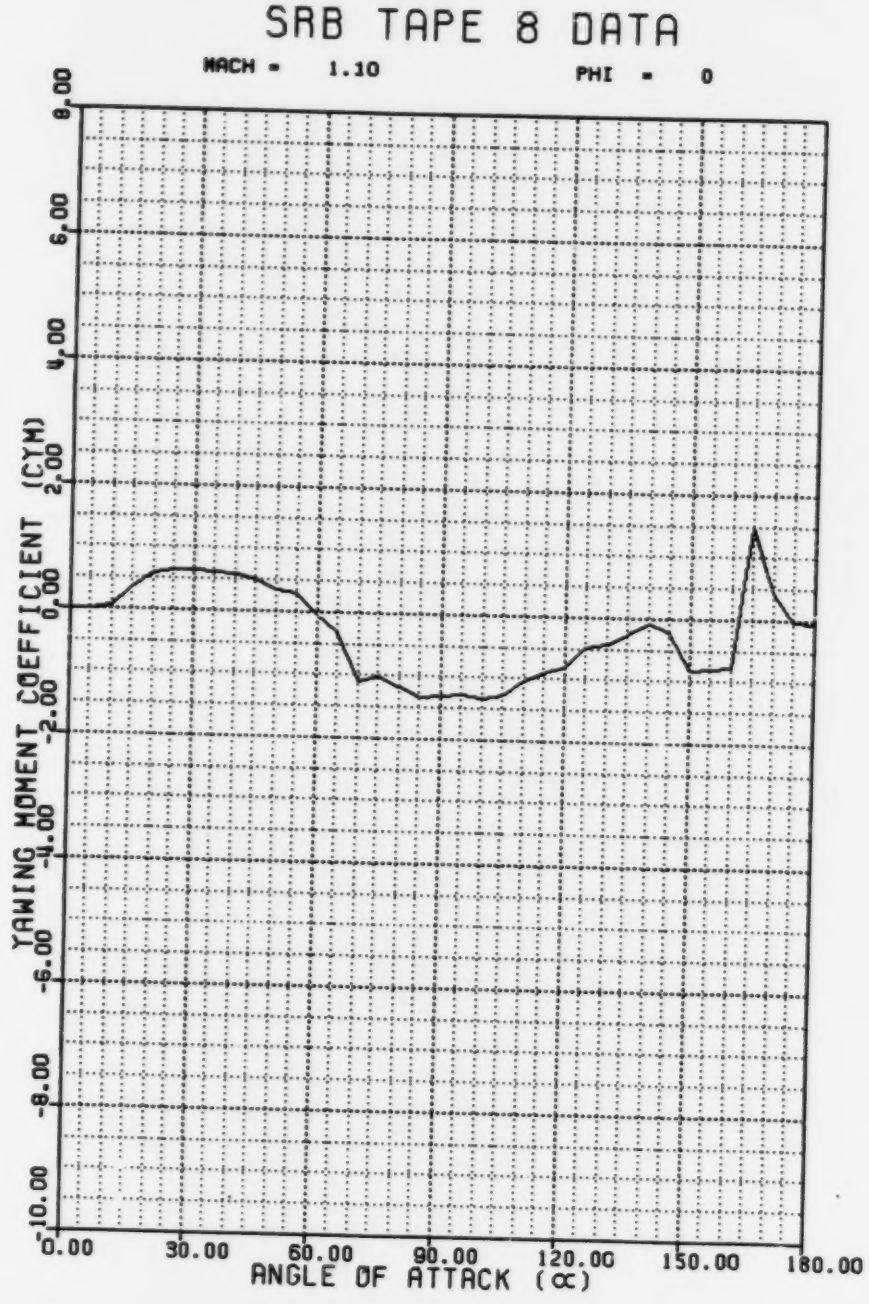
ANGLE OF ATTACK (α)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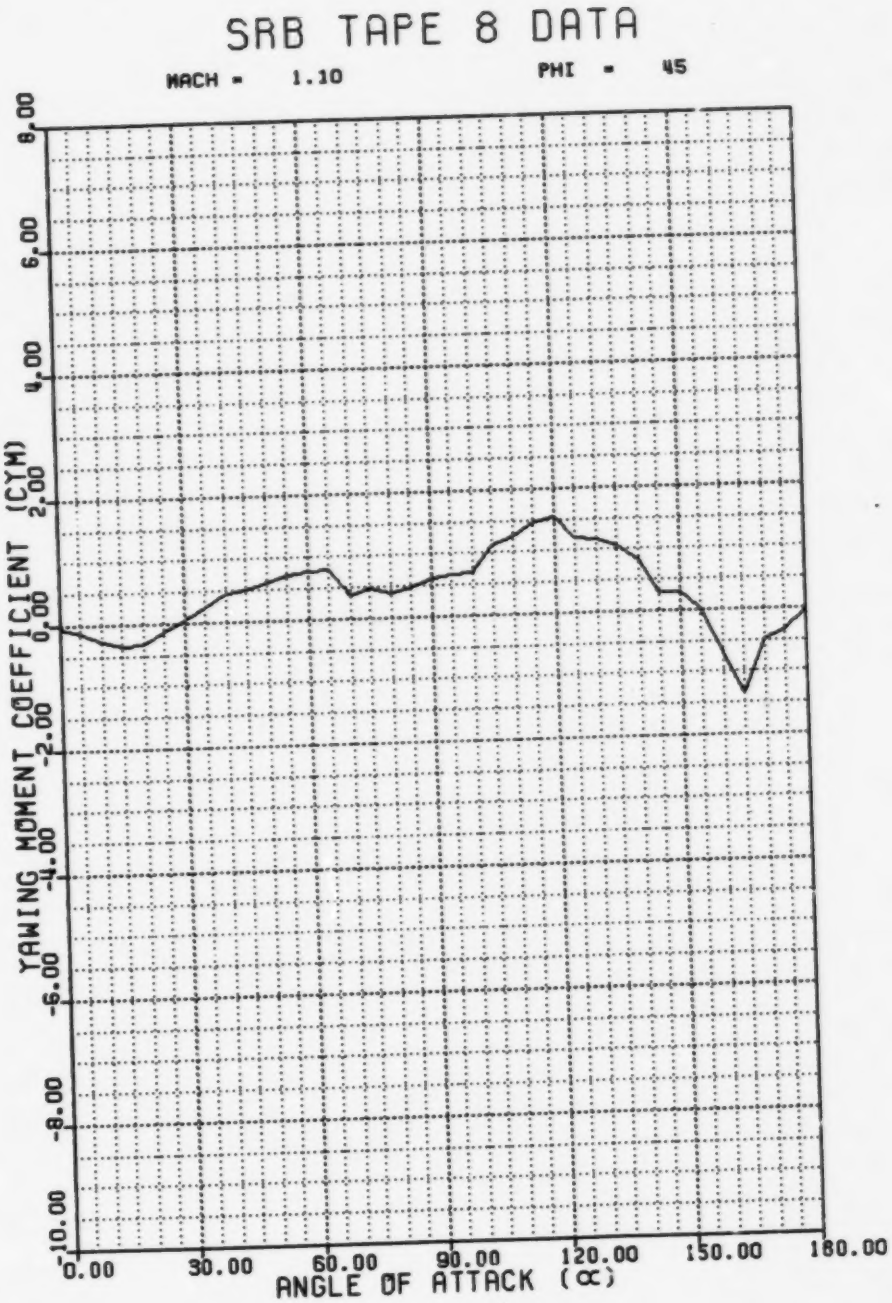
ANGLE OF ATTACK (α)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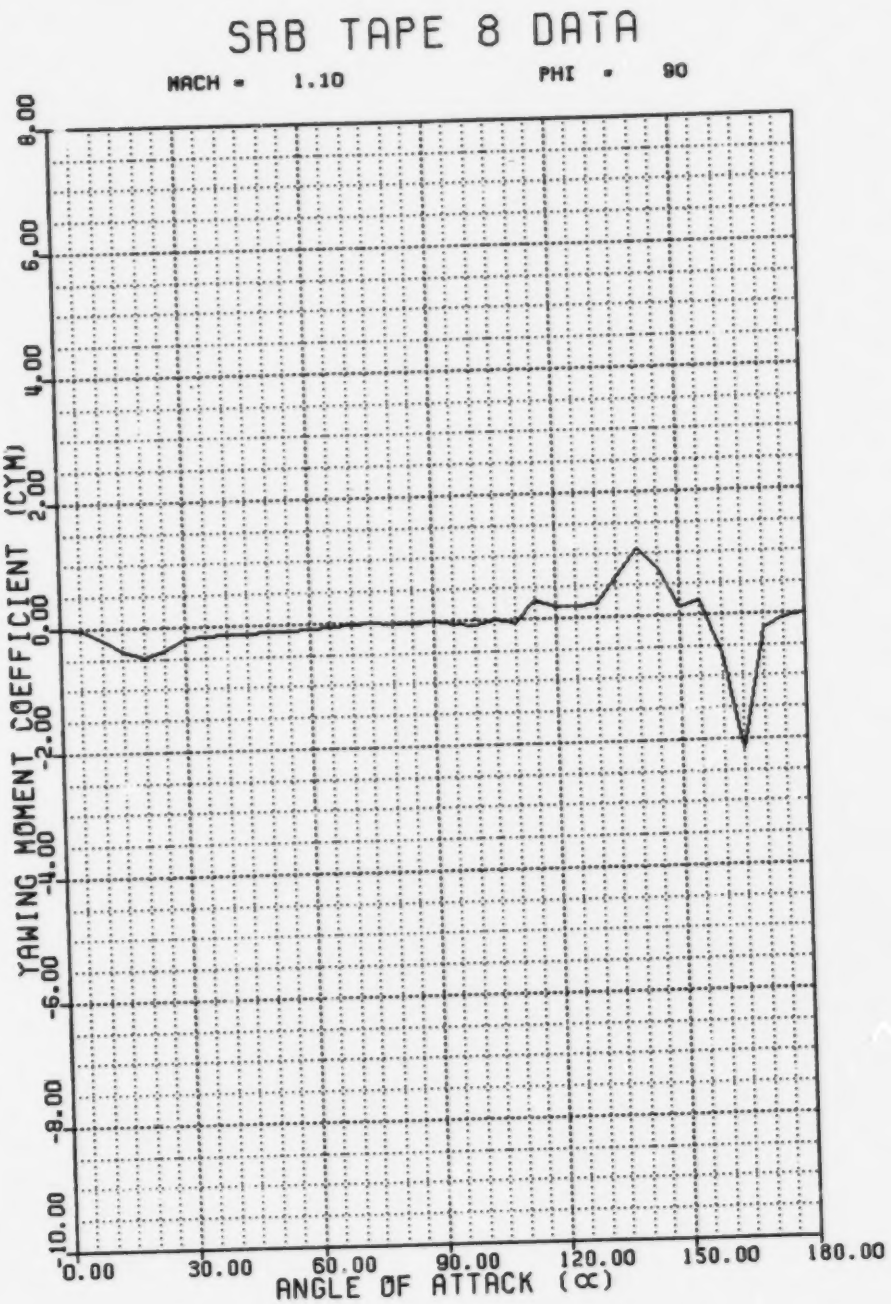
ANGLE OF ATTACK (α)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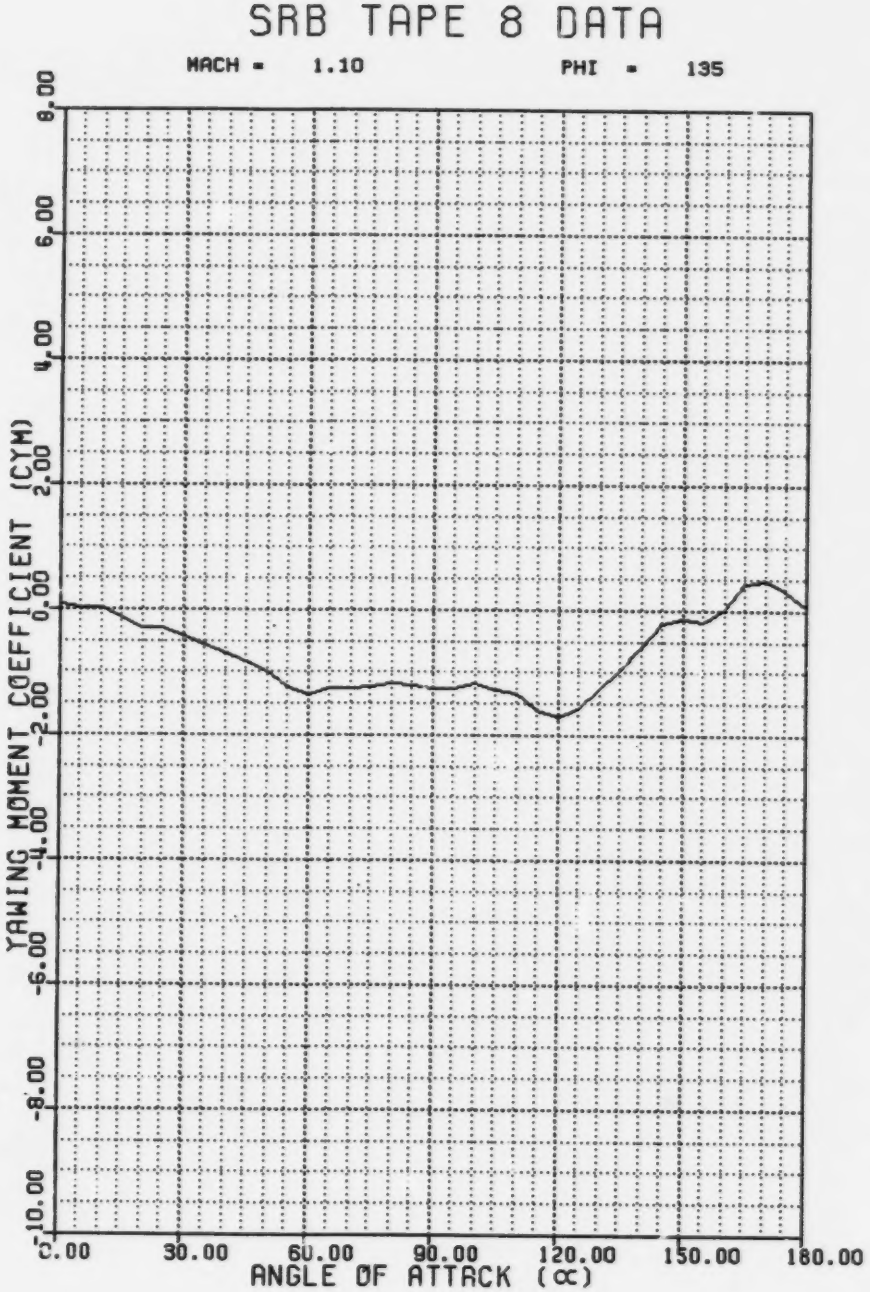
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 135
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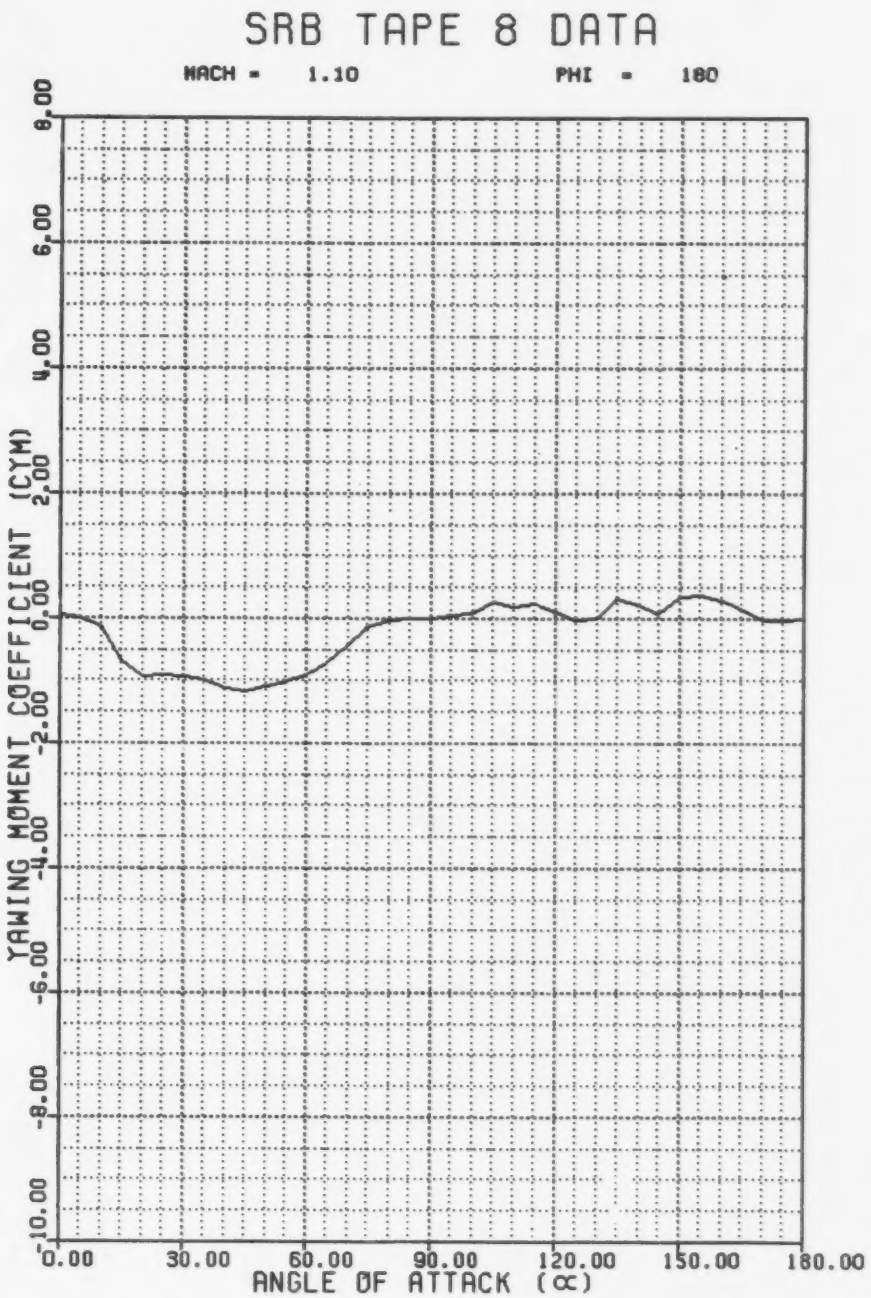
ANGLE OF ATTACK (α)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150.00
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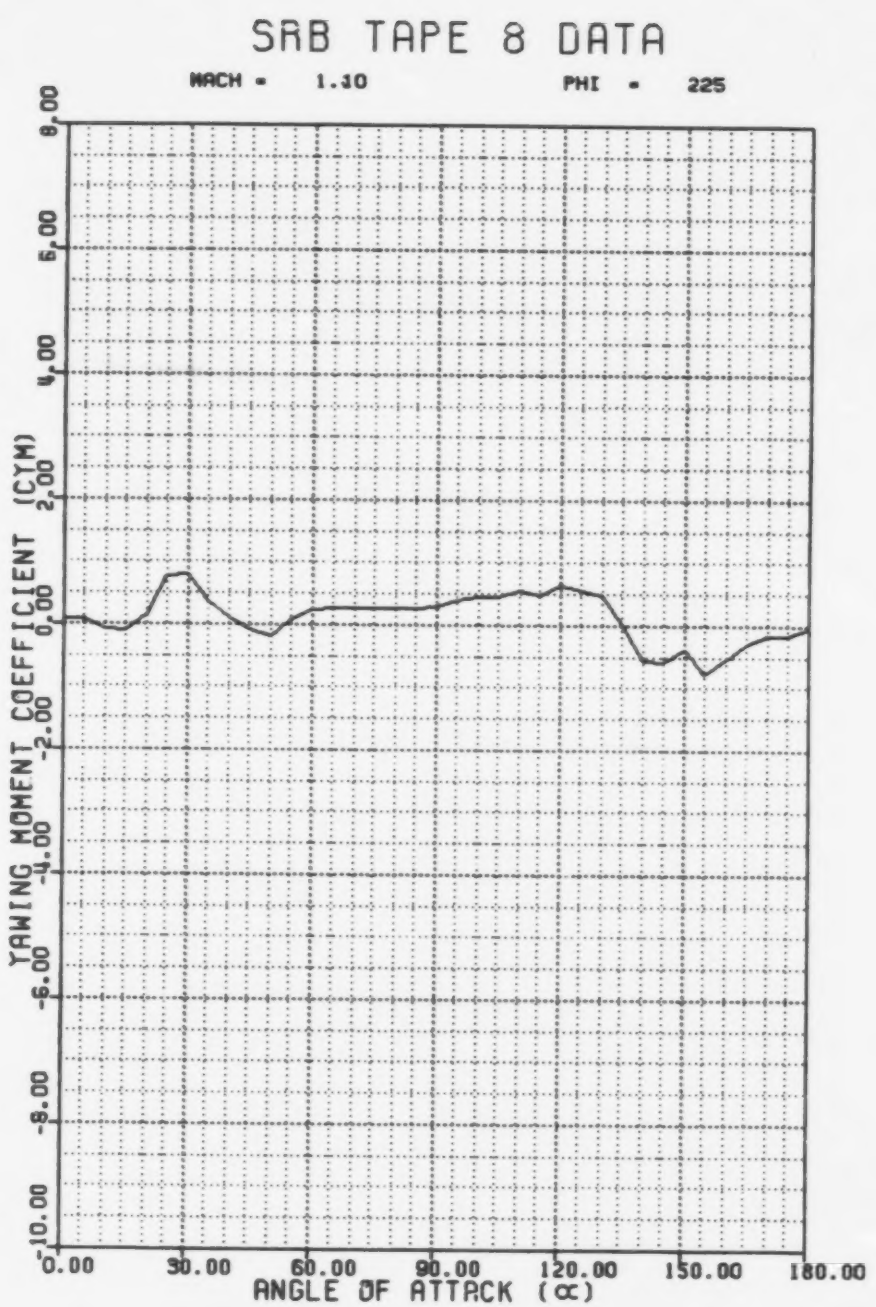
ANGLE OF ATTACK (α)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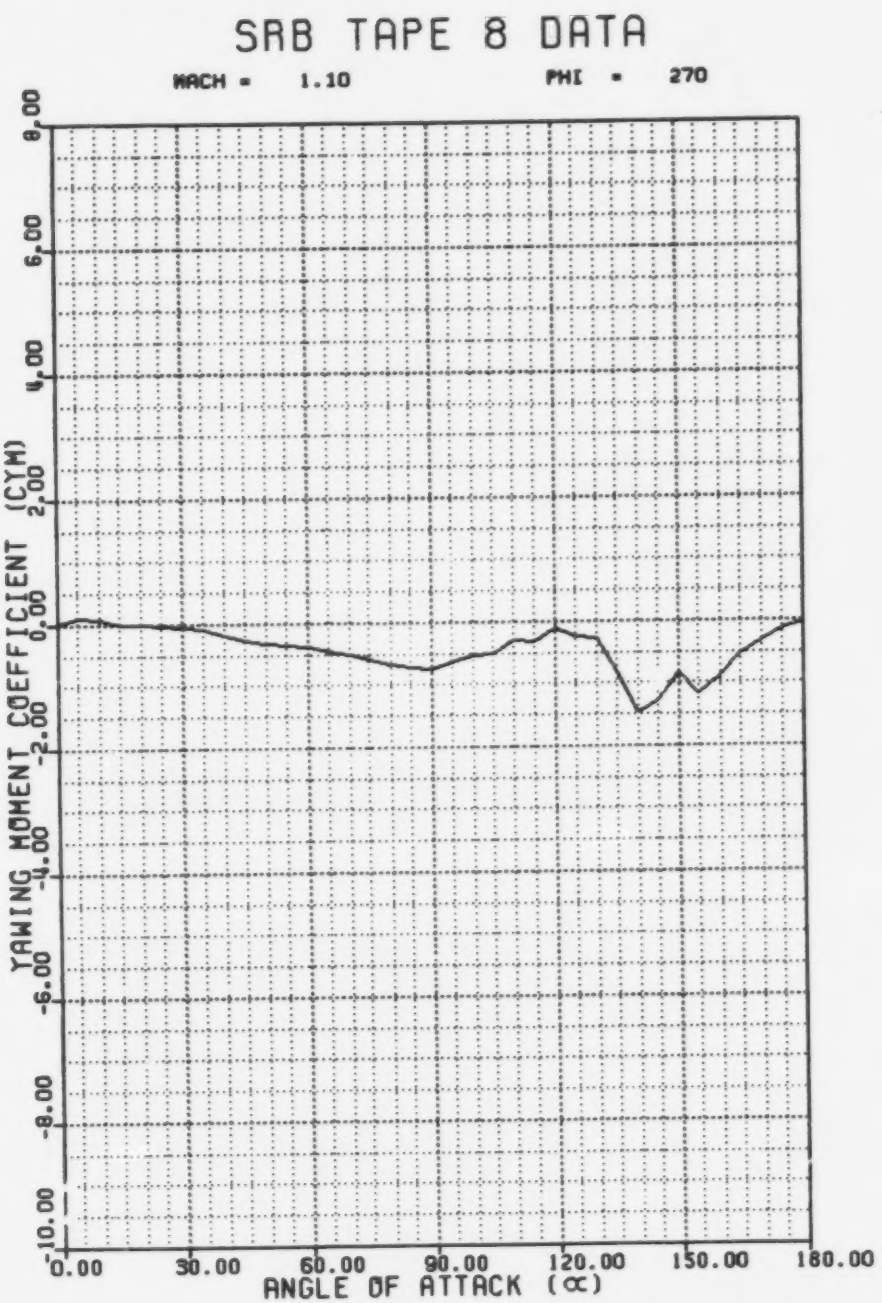
180.00
ANGLE OF ATTACK (α)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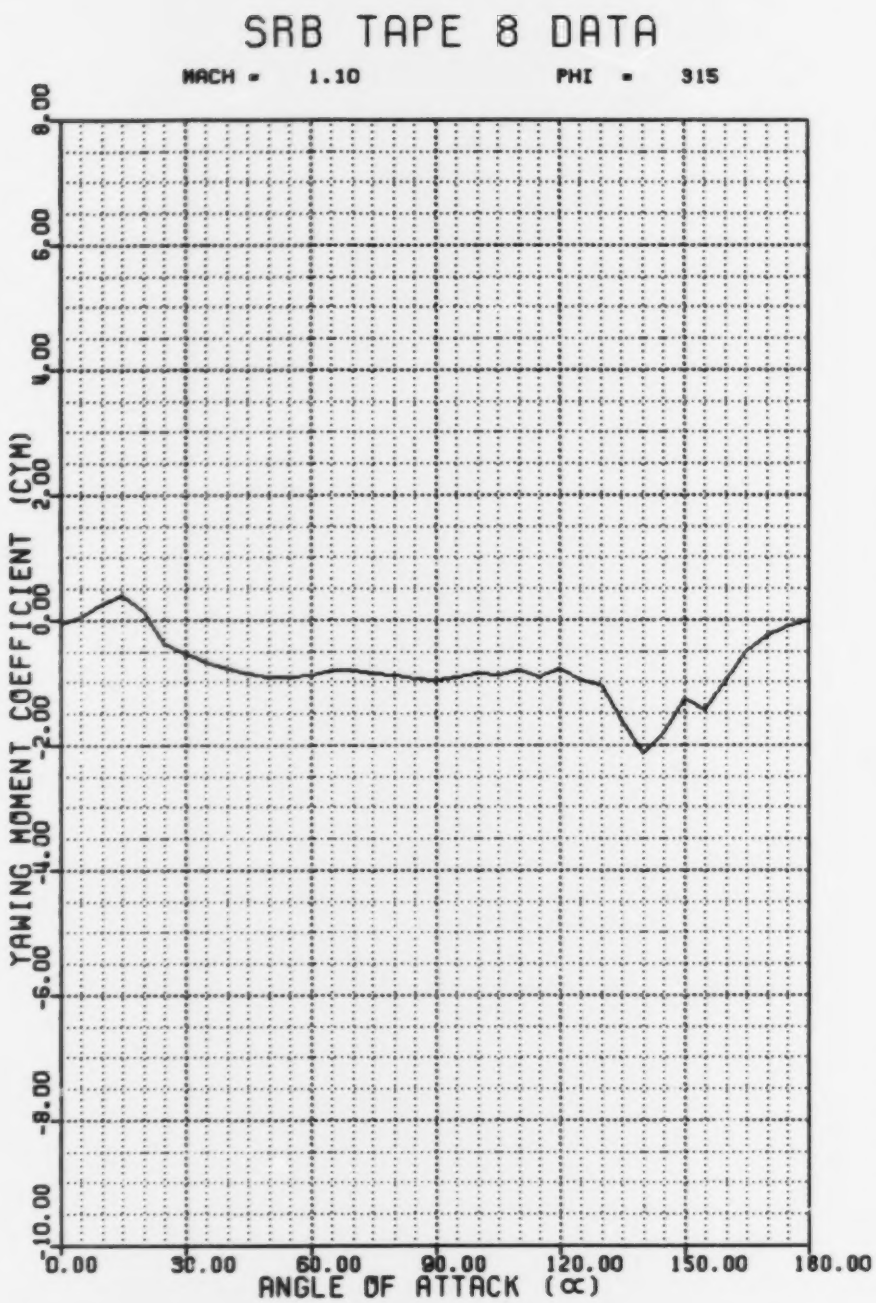
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
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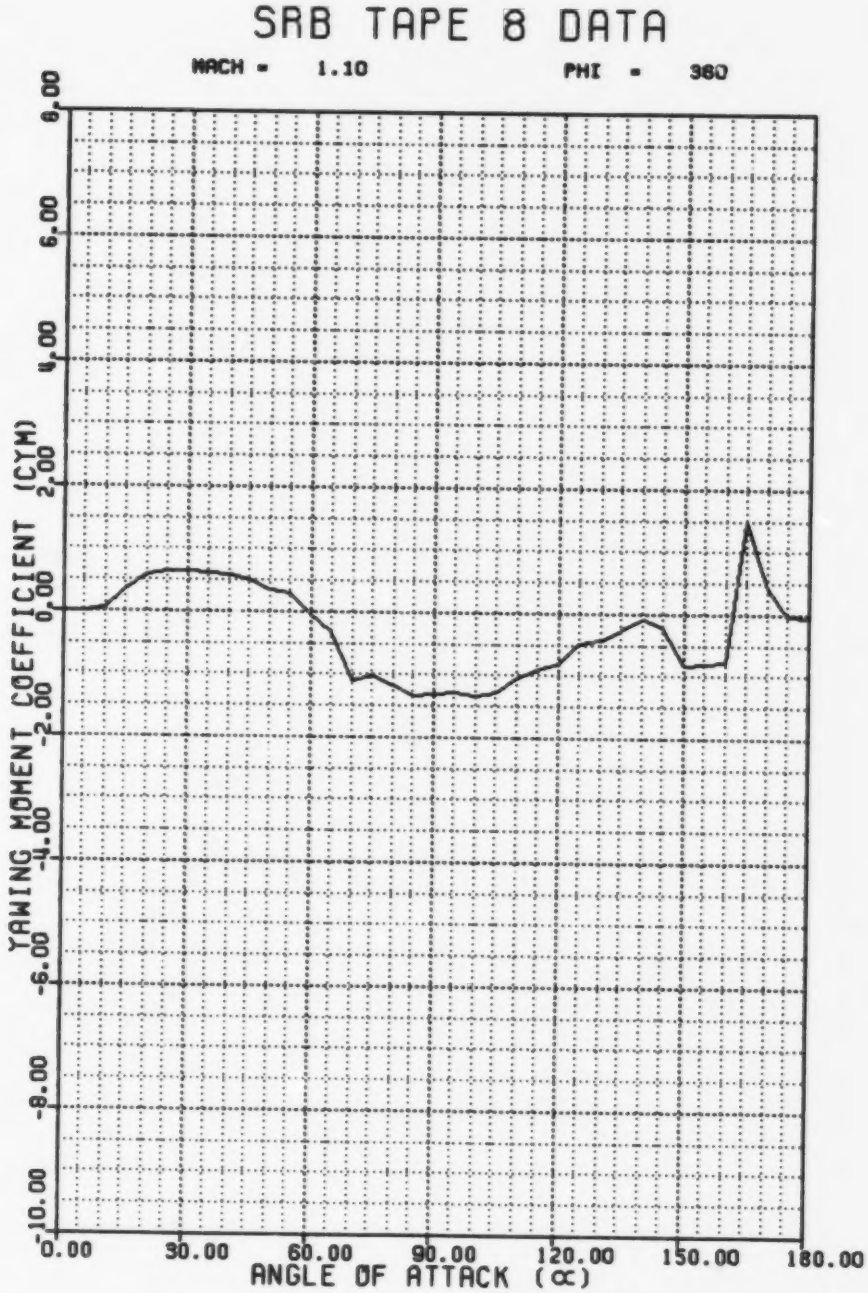
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 360
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-2.00
-4.00
-6.00
-8.00
-10.00
0.00
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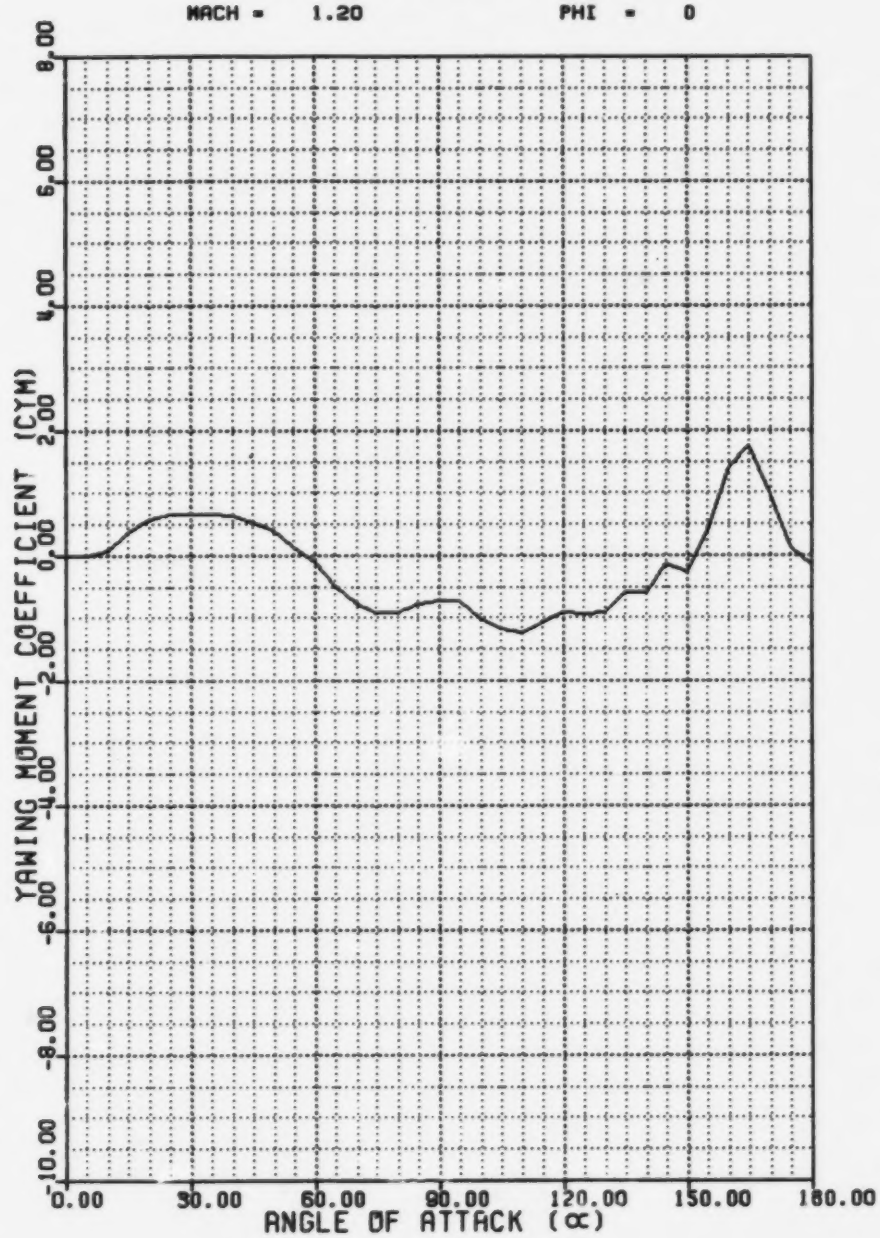
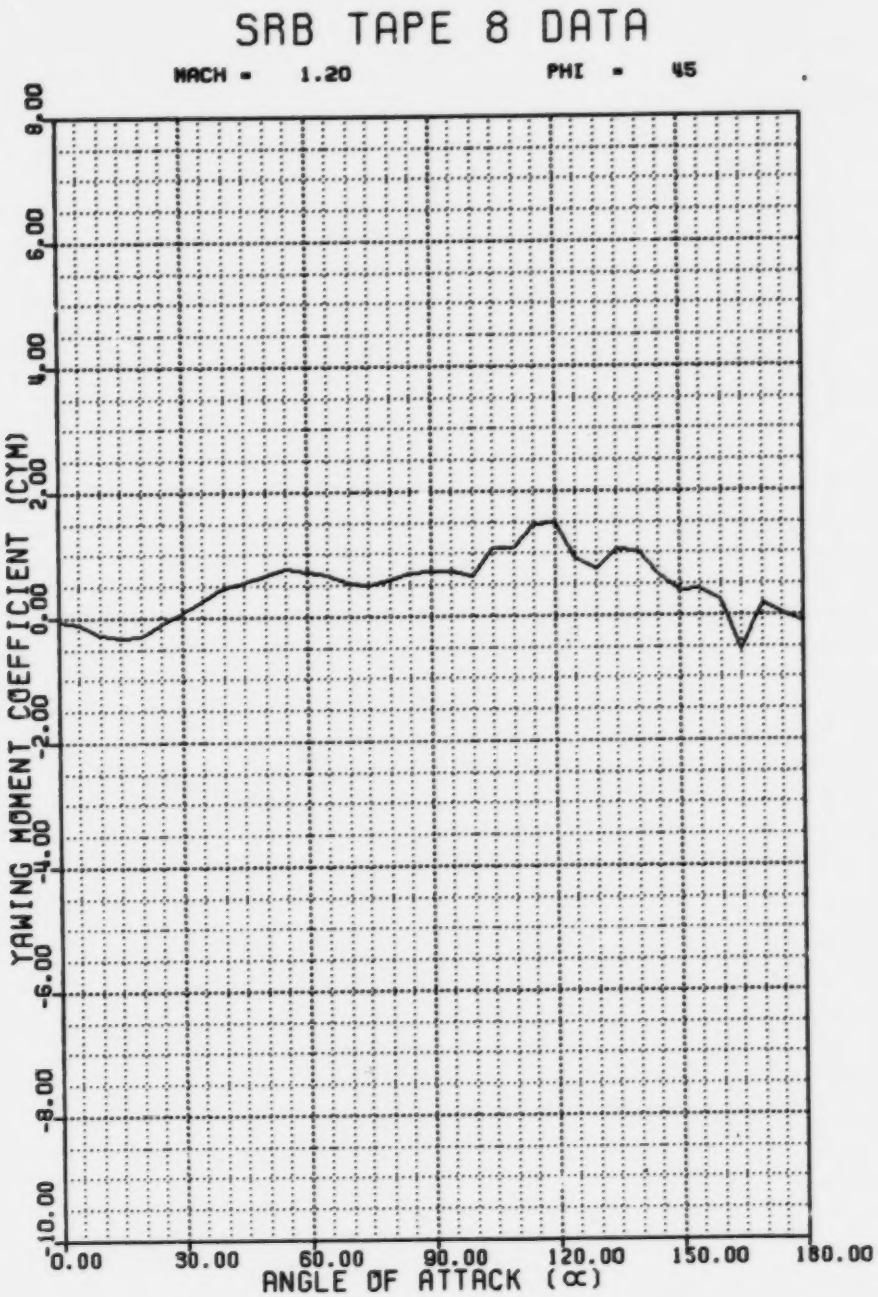
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.20 PHI = 0




SRB TAPE 8 DATA
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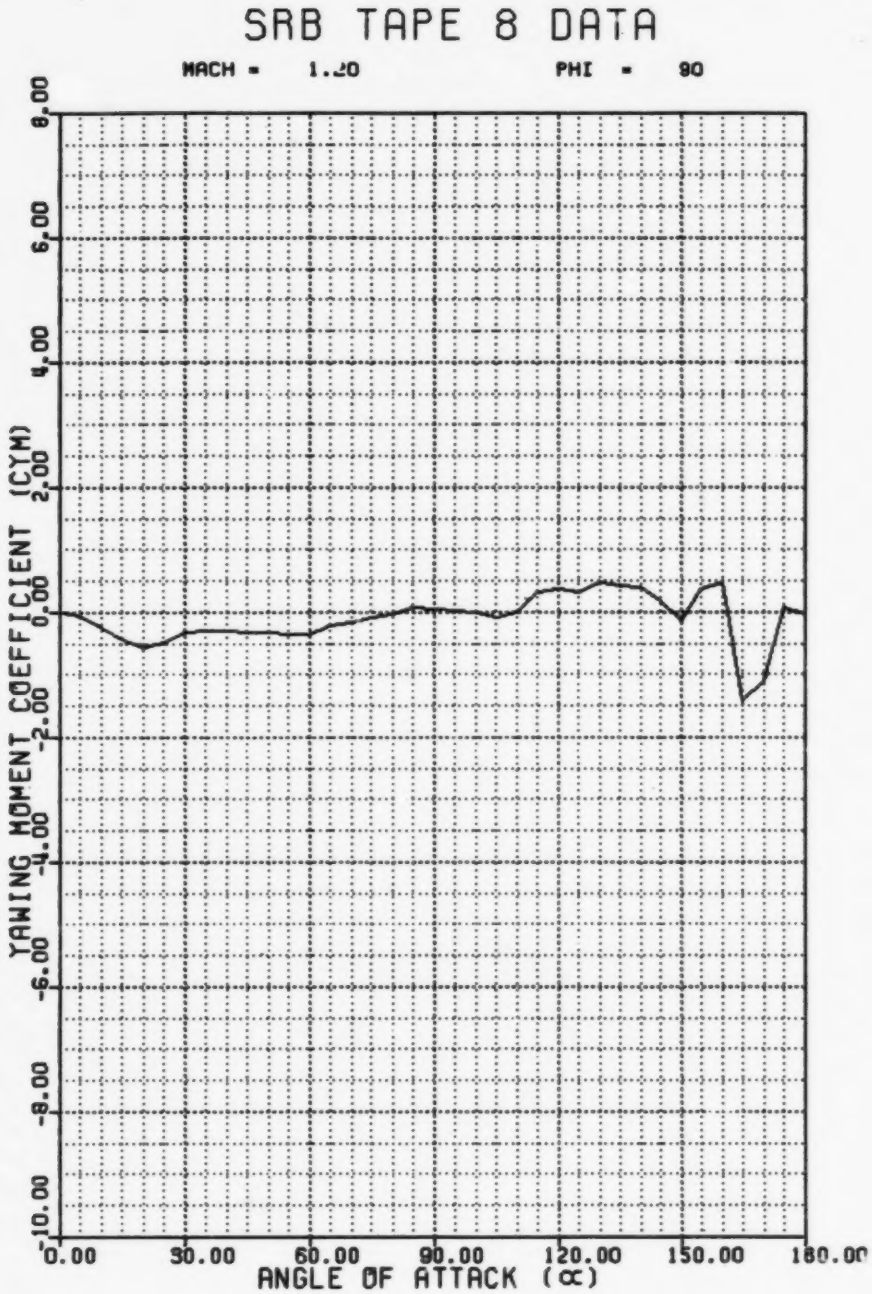
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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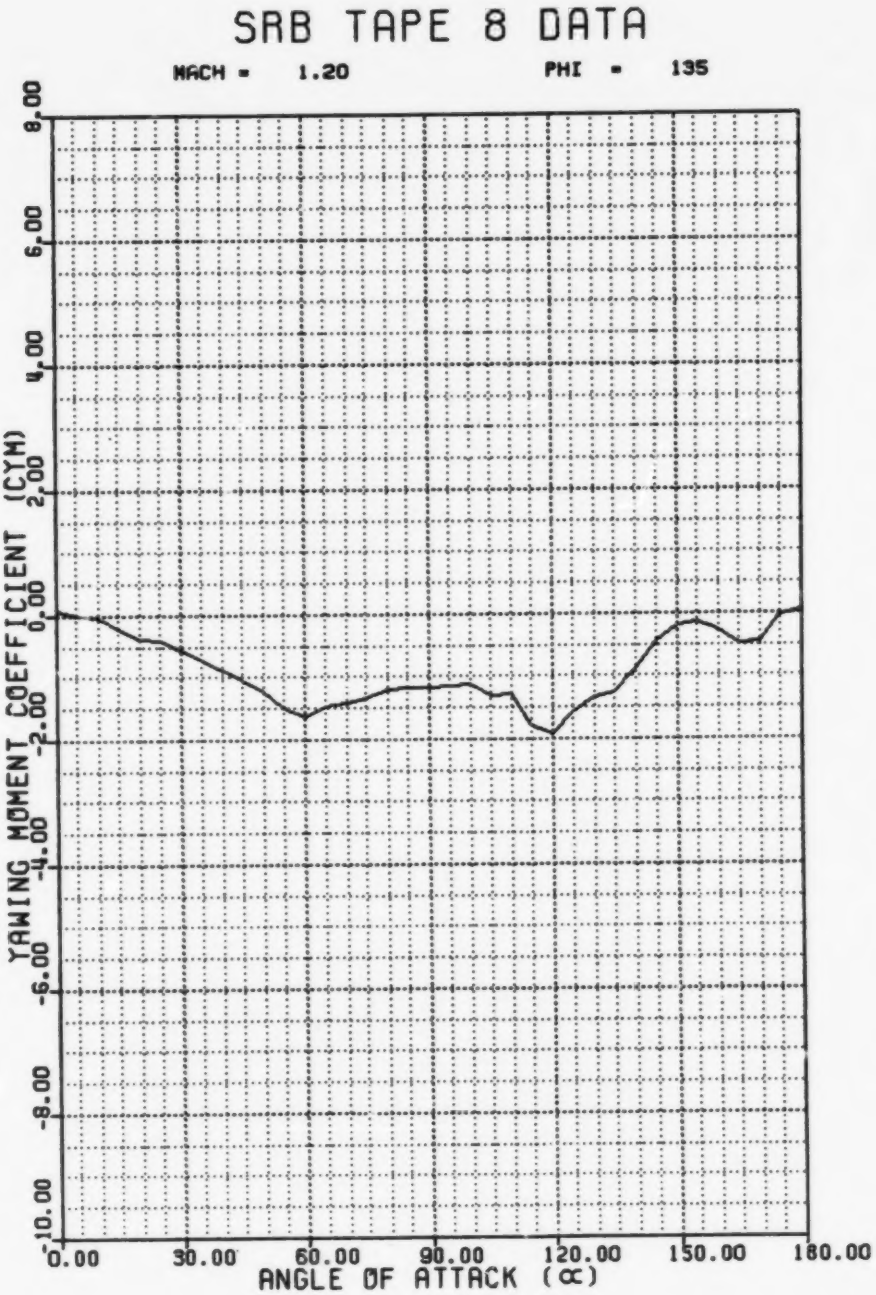
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 135
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120.00
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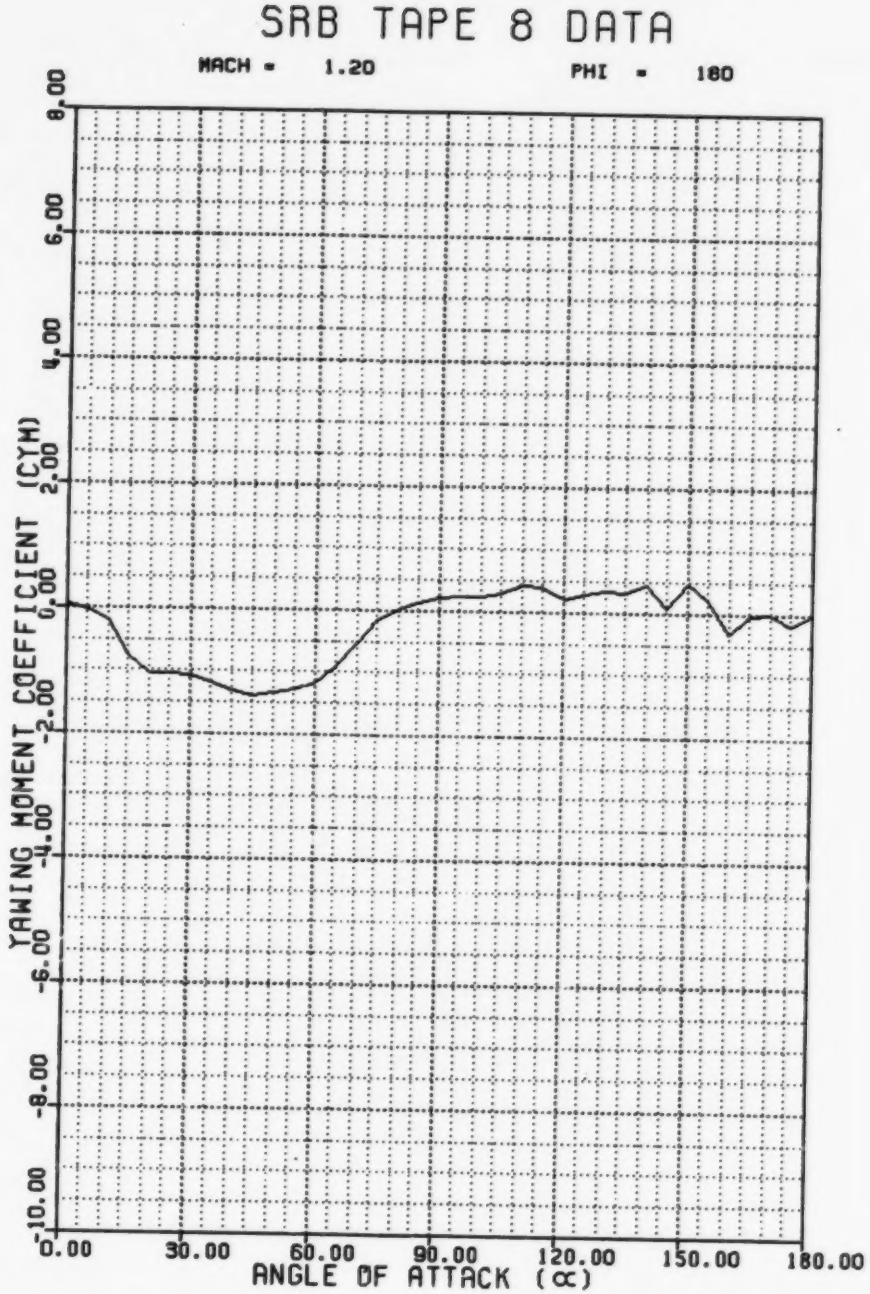
180.00
ANGLE OF ATTACK (α)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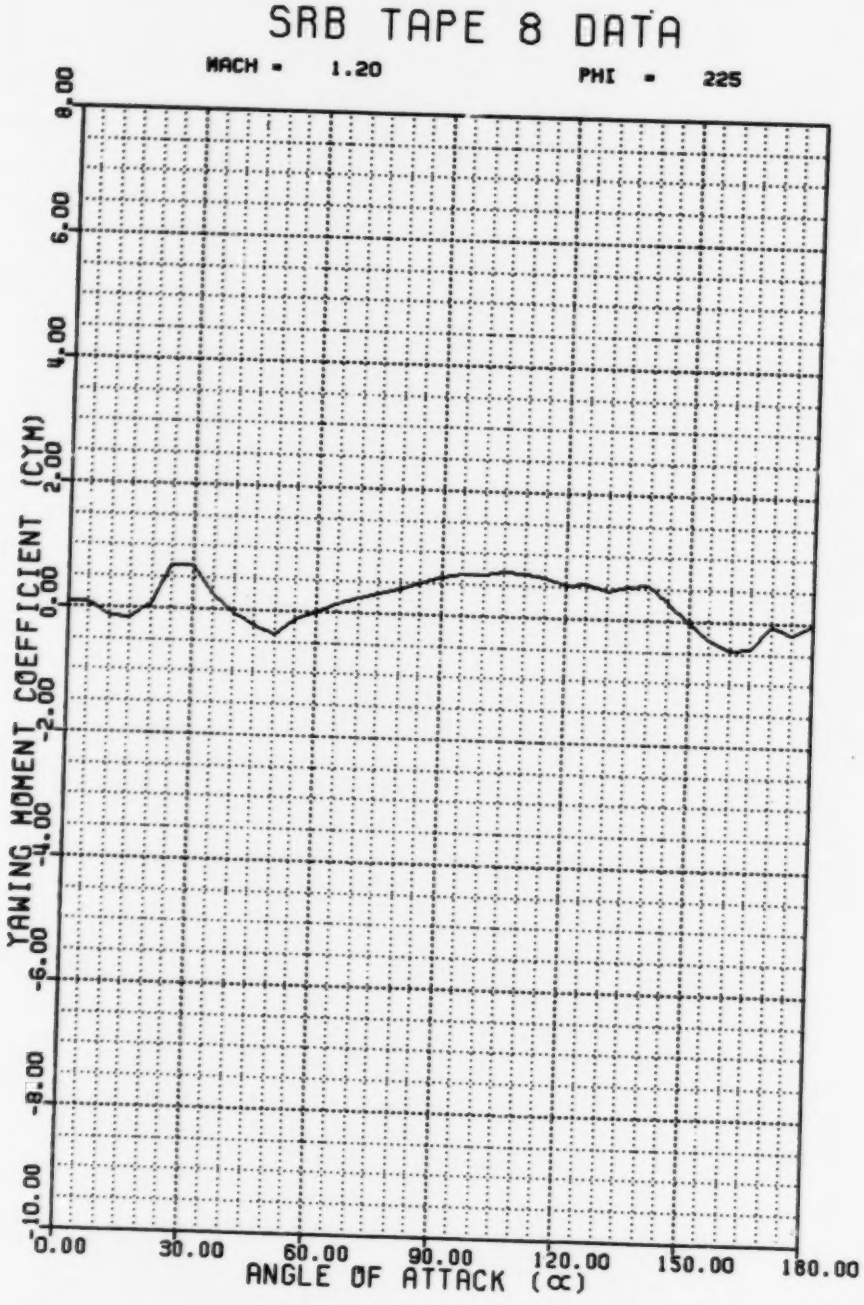
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 225
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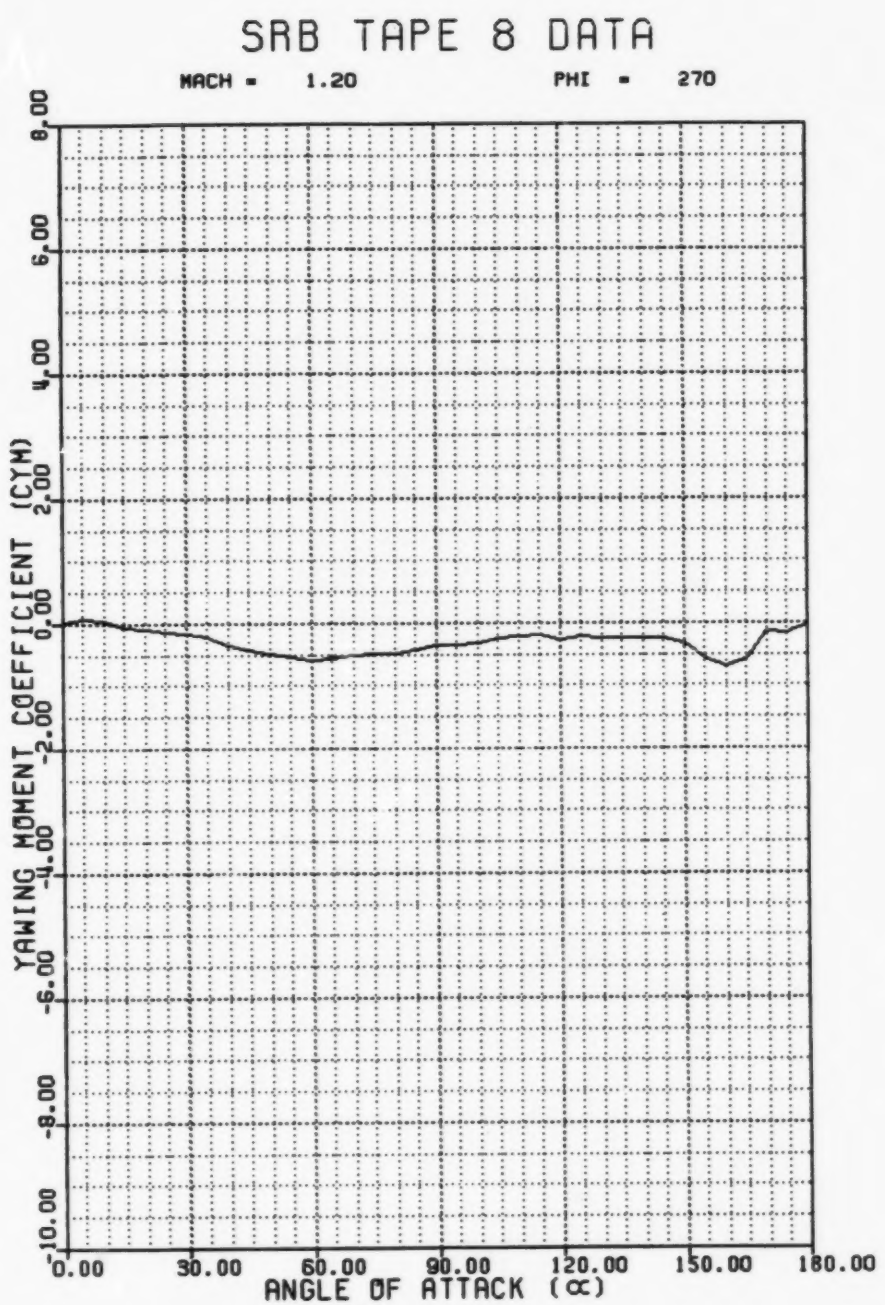
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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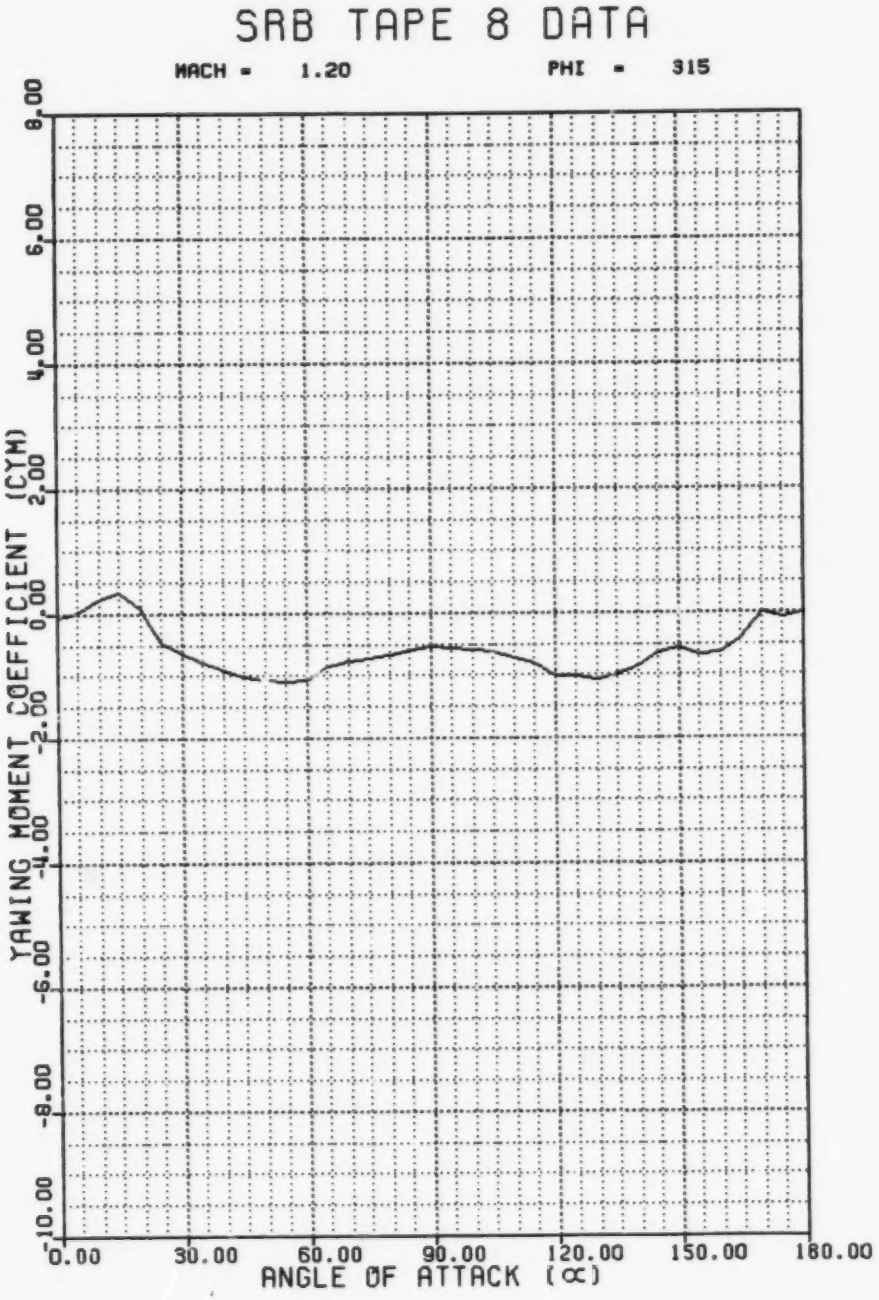
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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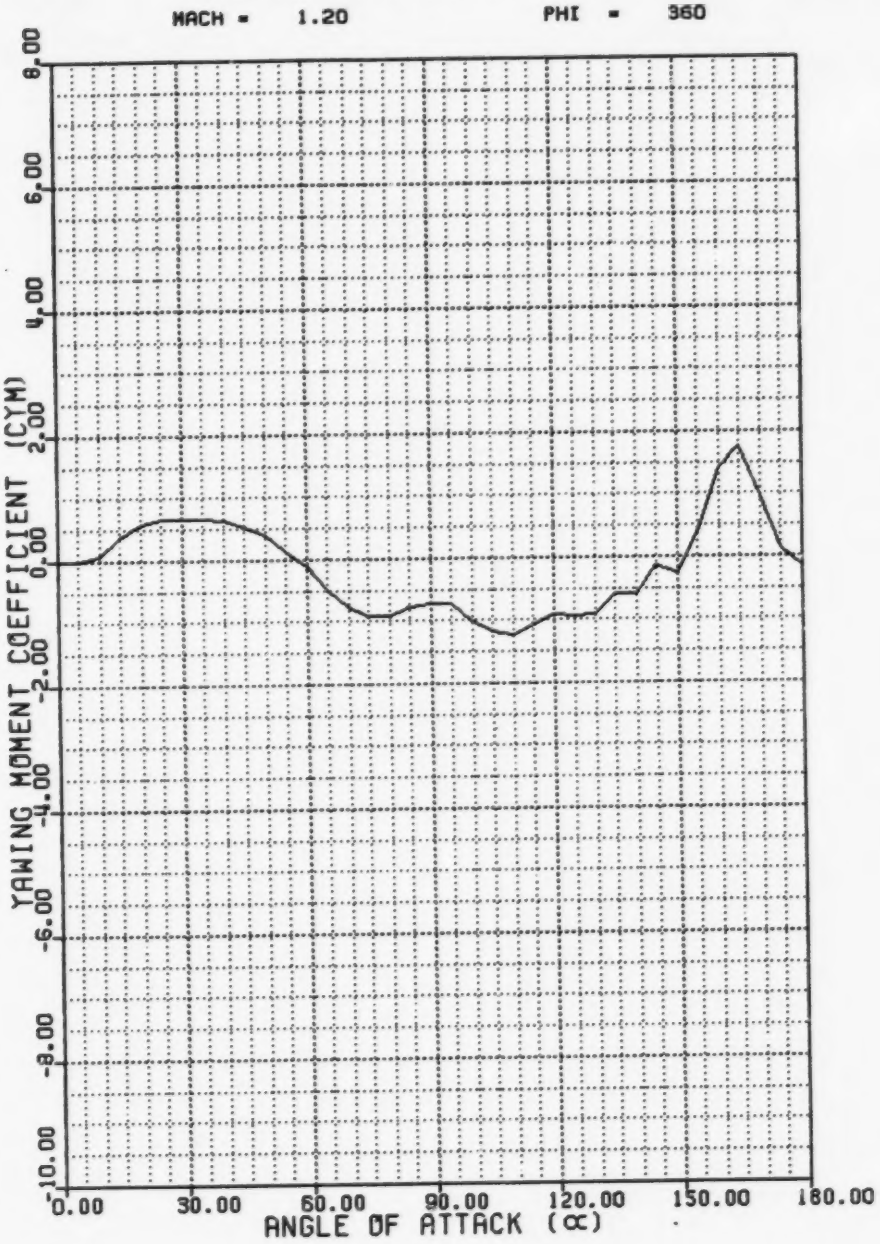
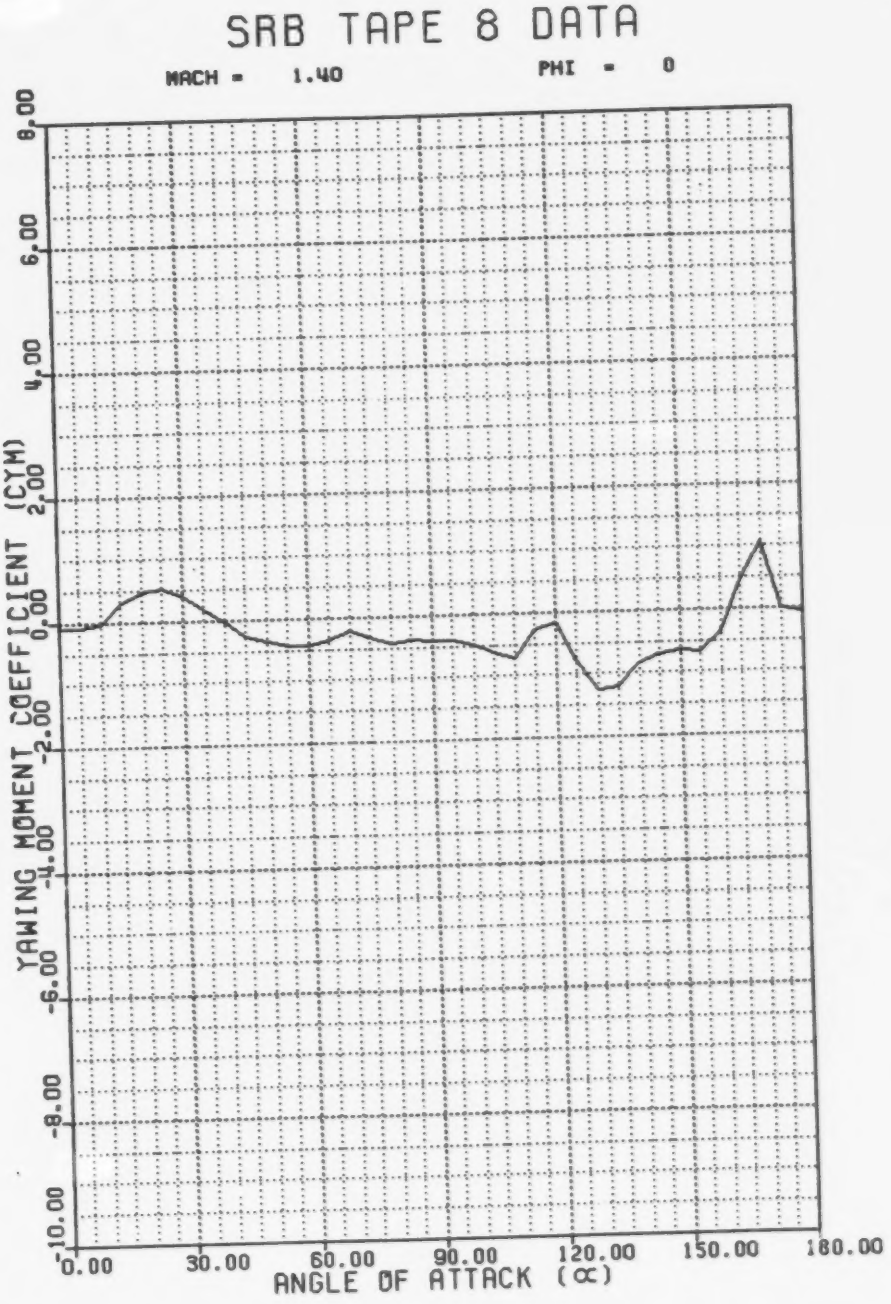
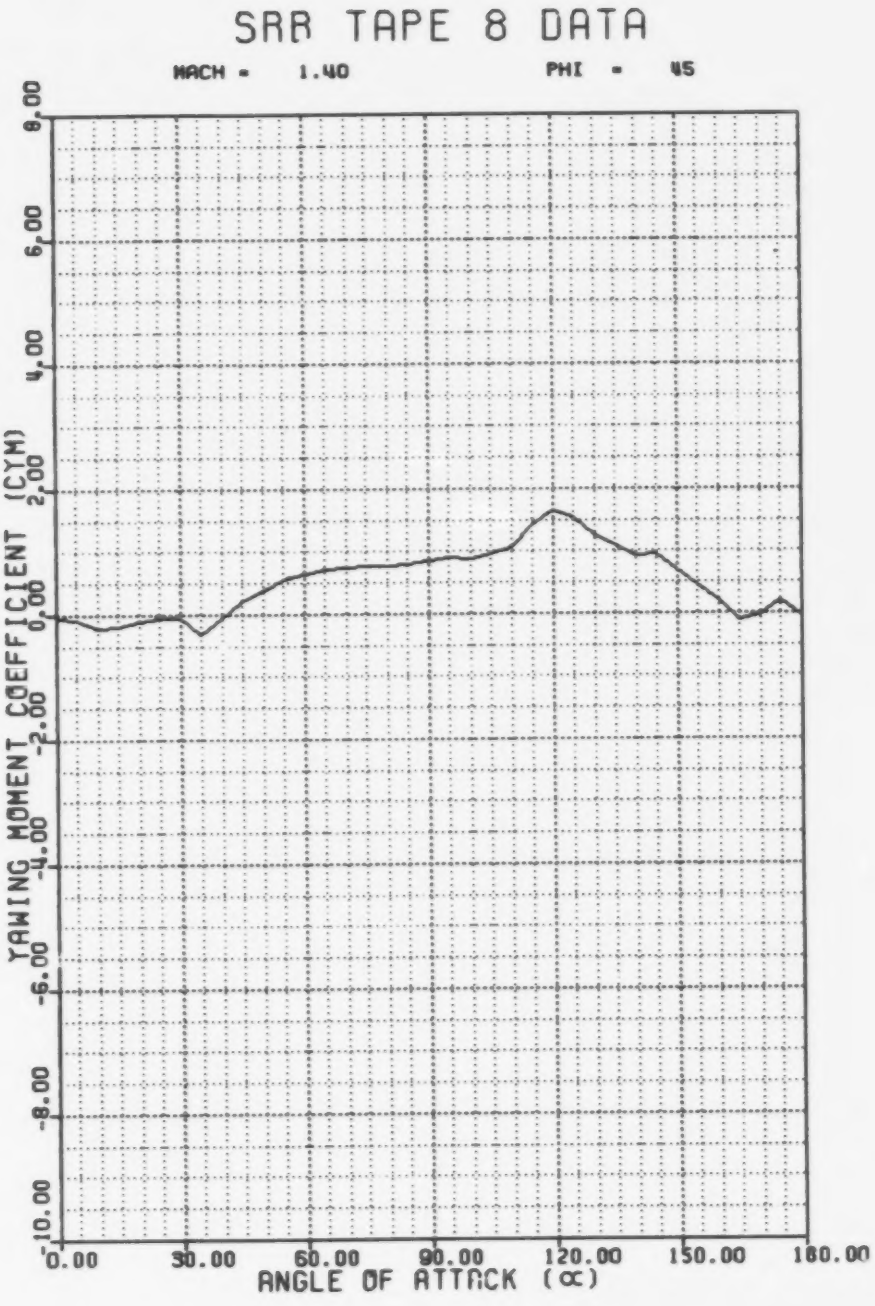
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE & DATA

MACH = 1.20 PHI = 360




SRB TAPE 8 DATA
MACH = 1.40
PHI = 0
YAWING MOMENT COEFFICIENT (CYM)
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 45
YAWING MOMENT COEFFICIENT (CYM)
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4.00
2.00
0.00
-2.00
-4.00
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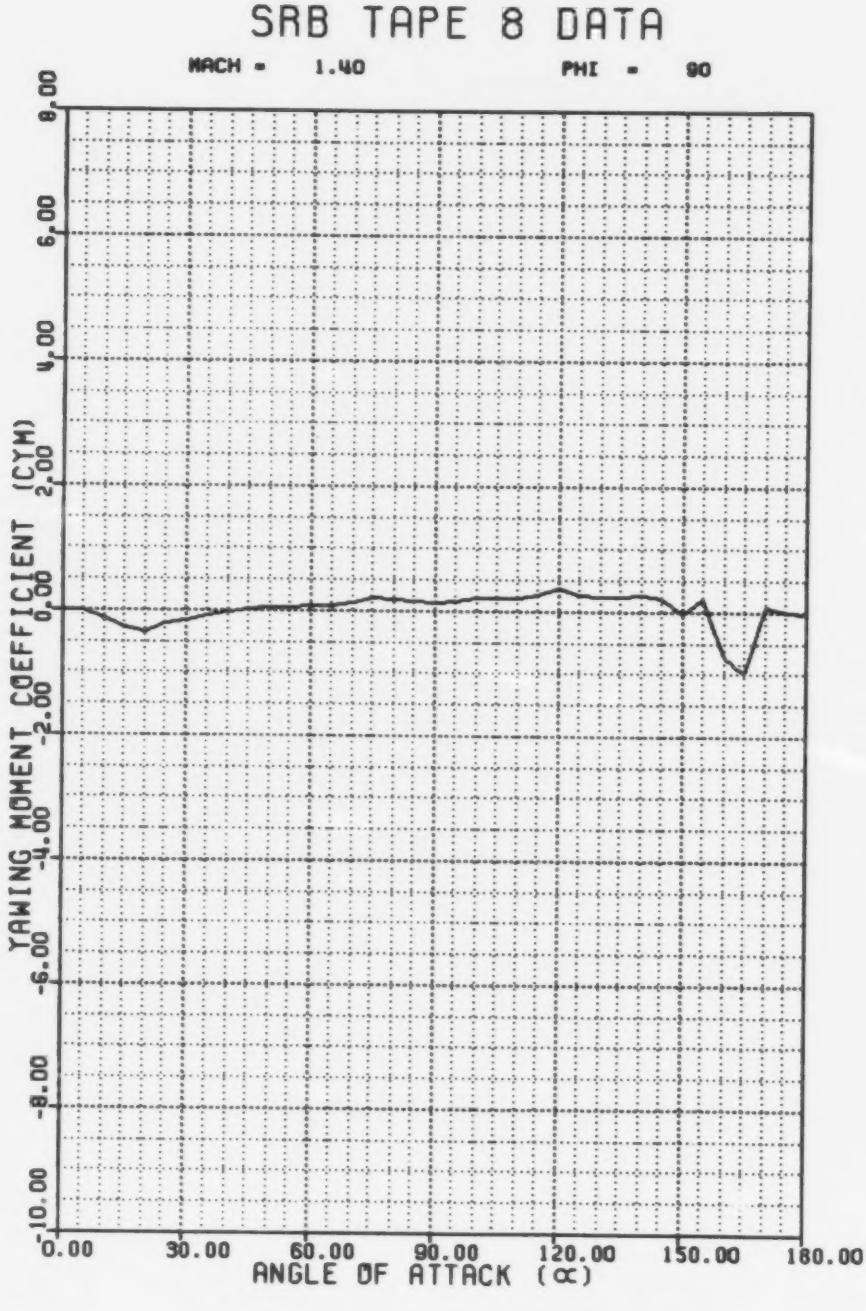
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 90
YAWING MOMENT COEFFICIENT (CYM)
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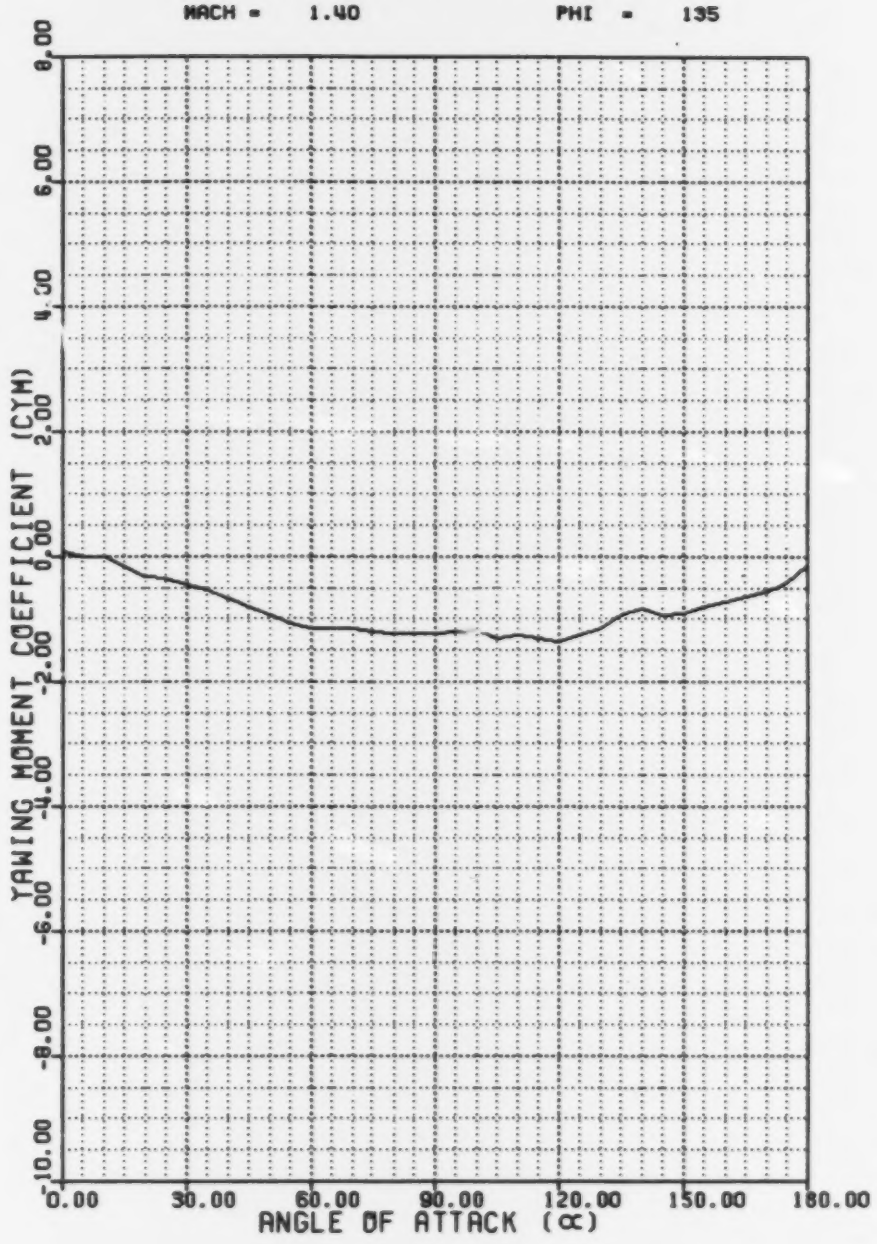
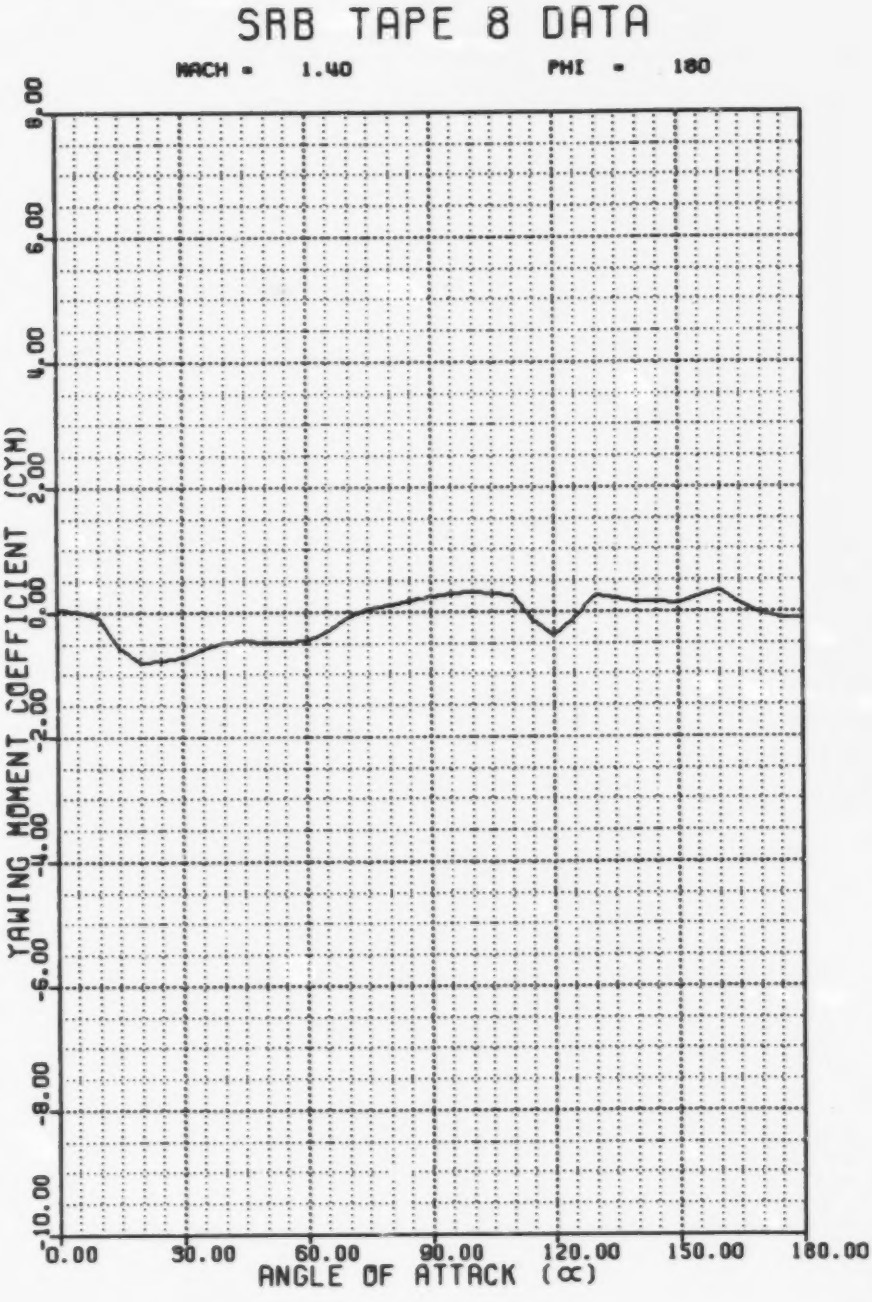
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE & DATA

MACH = 1.40 PHI = 135




SRB TAPE 8 DATA
MACH = 1.40
PHI = 180
YAWING MOMENT COEFFICIENT (CYM)
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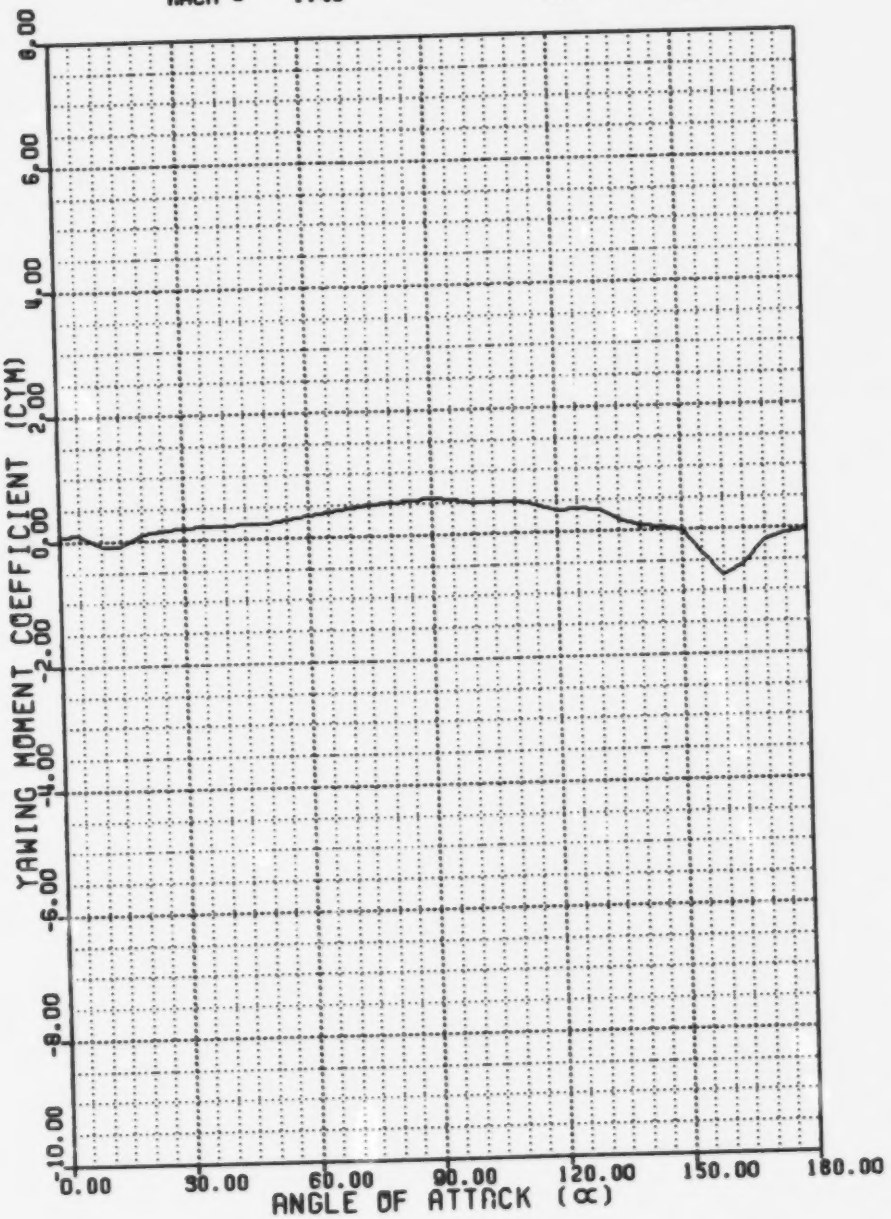
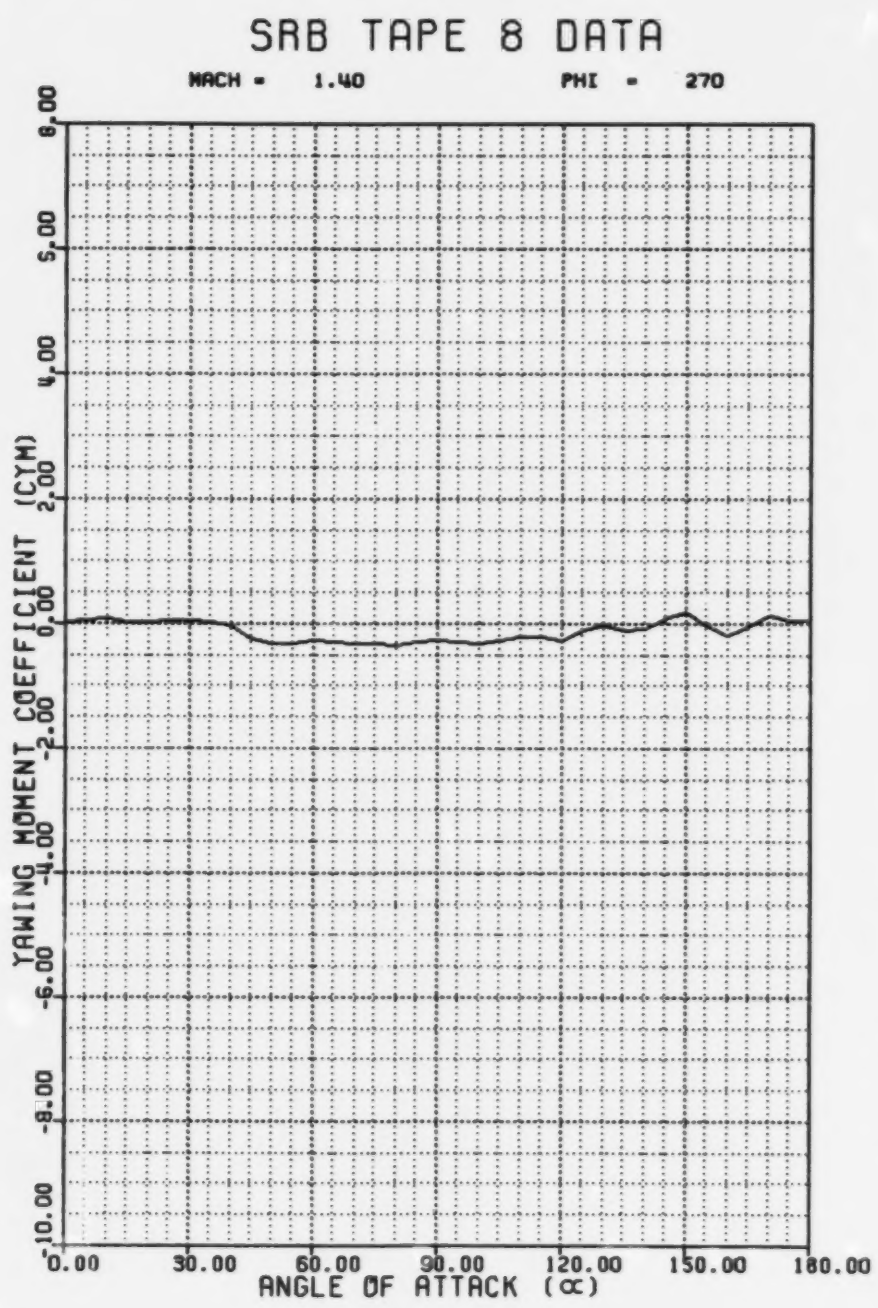
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.40 PHI = 225




SRB TAPE 8 DATA
MACH = 1.40
PHI = 270
YAWING MOMENT COEFFICIENT (CYM)
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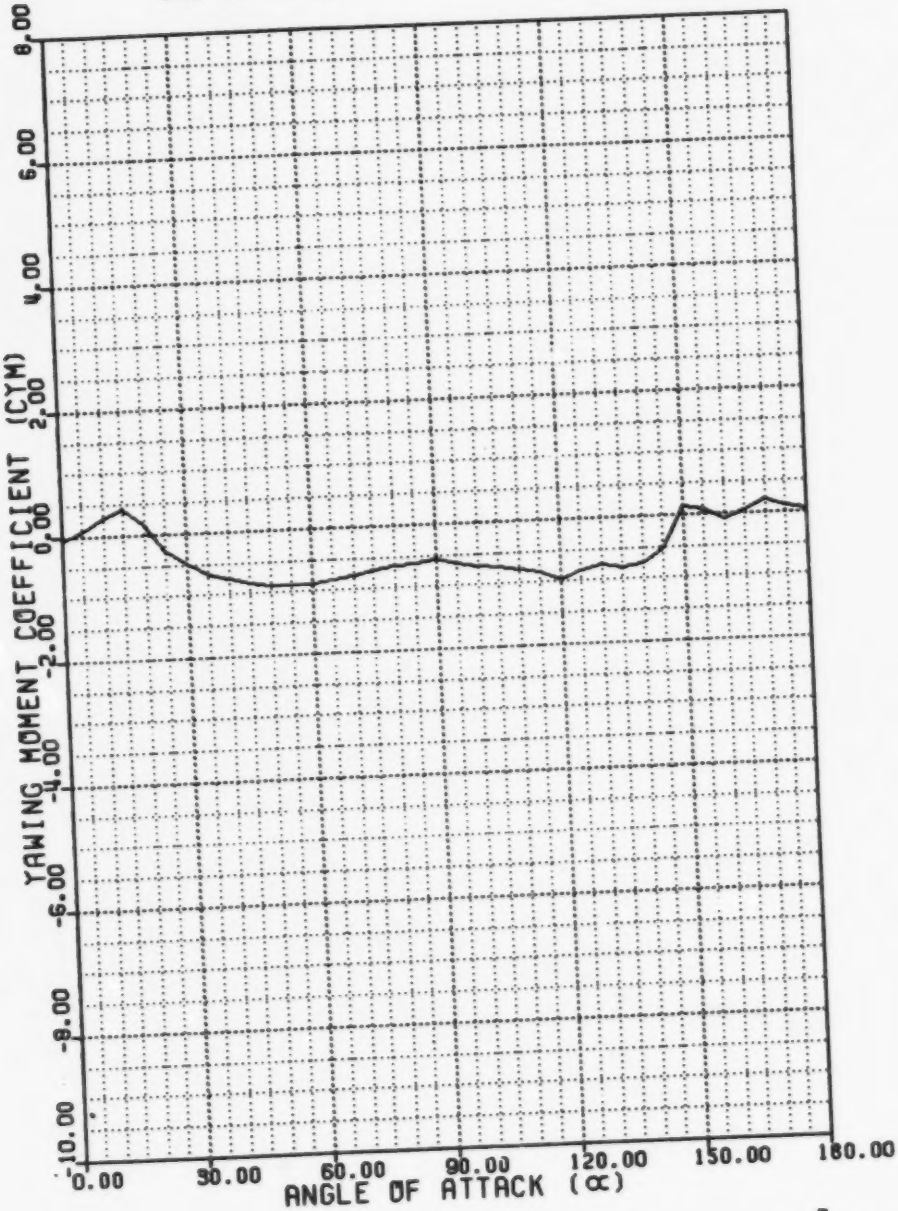
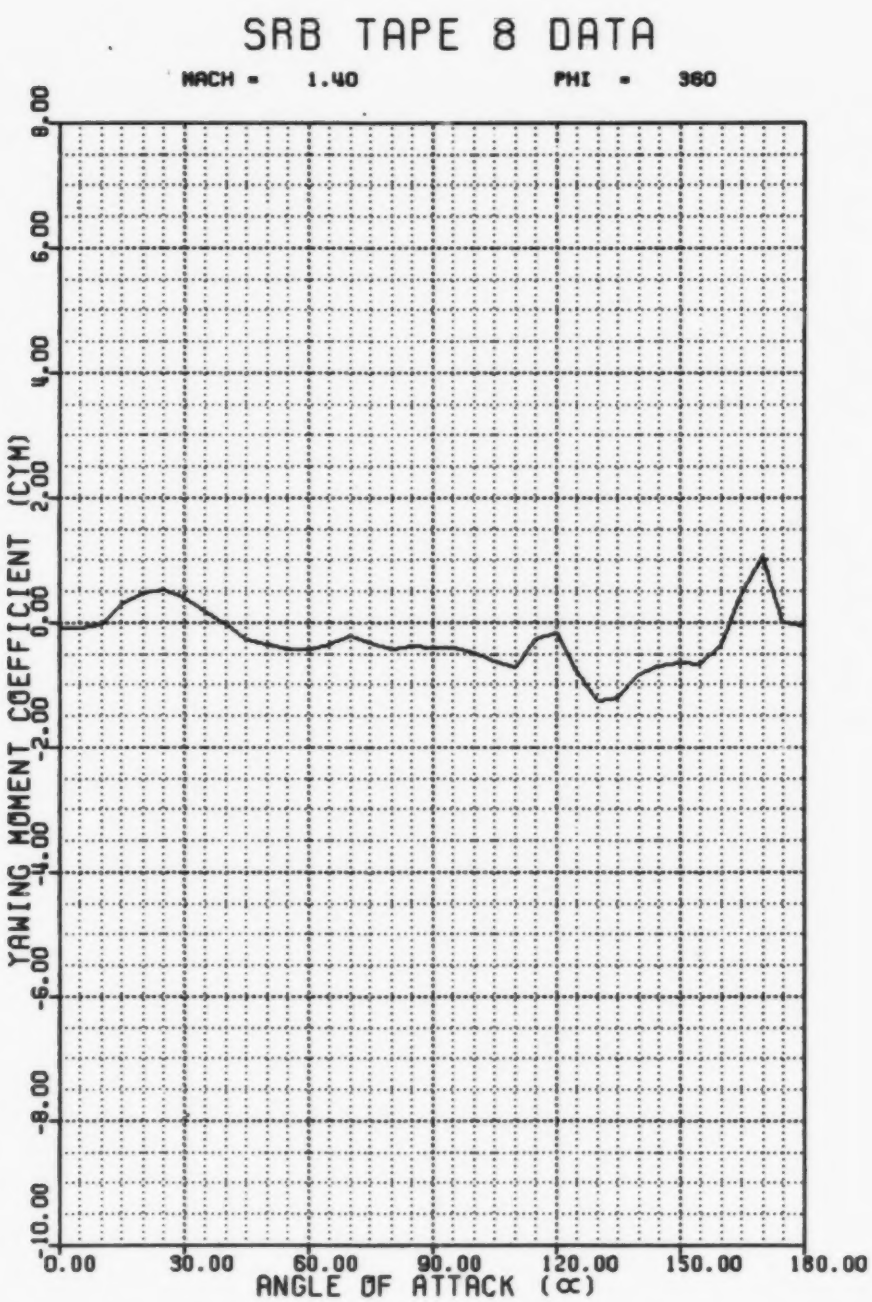
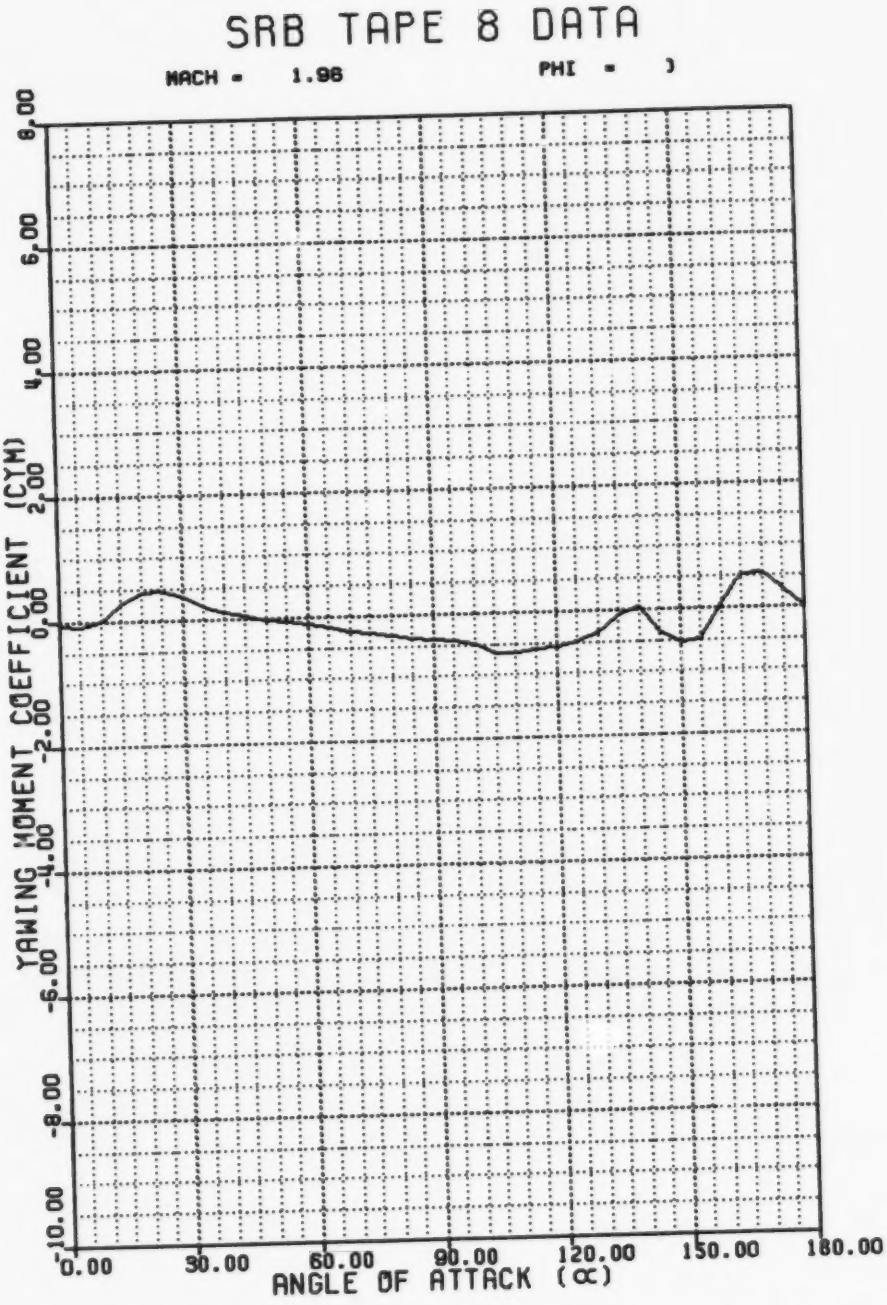
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.40 PHI = 315




SRB TAPE 8 DATA
MACH = 1.40
PHI = 360
YAWING MOMENT COEFFICIENT (CYM)
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.98
PHI =)
YAWING MOMENT COEFFICIENT (CYM)
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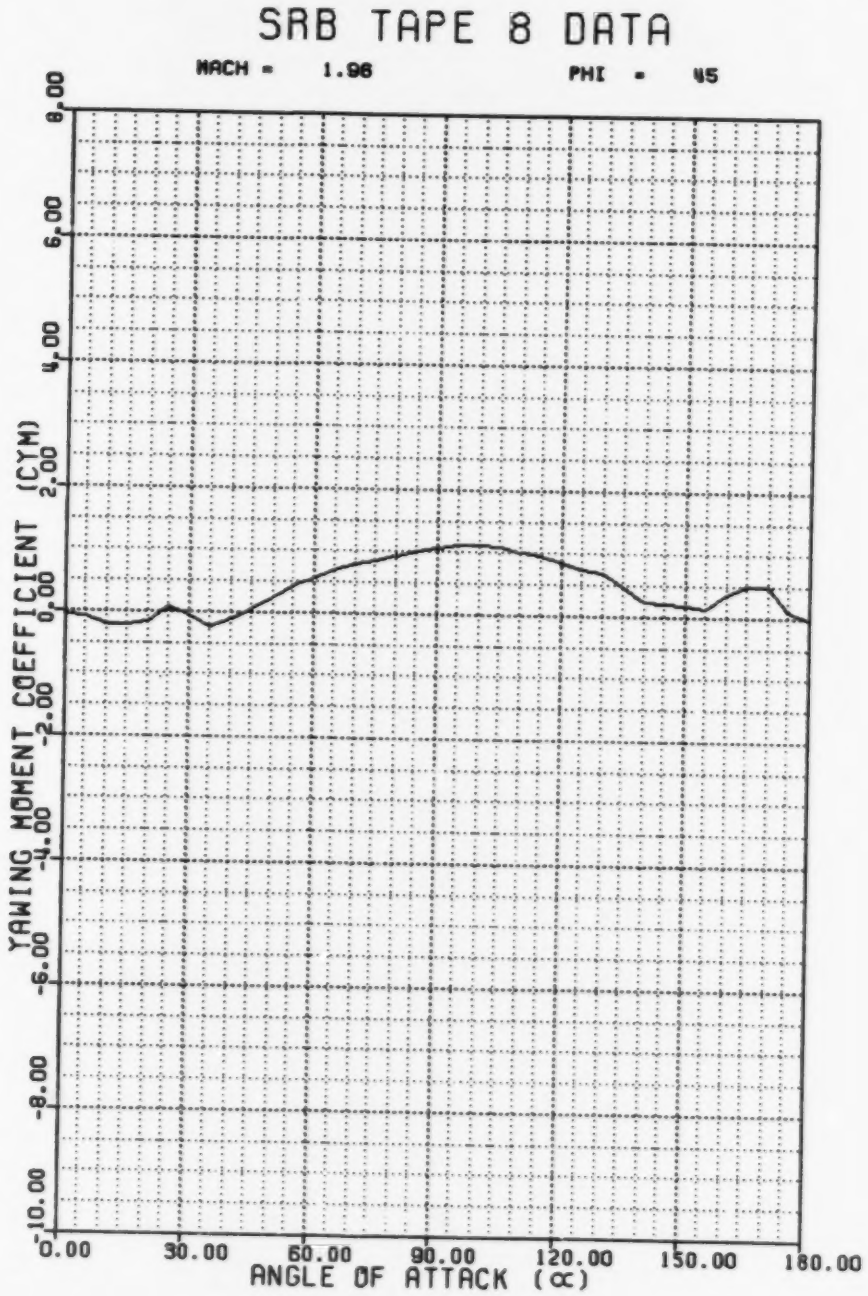
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 45
YAWING MOMENT COEFFICIENT (CYM)
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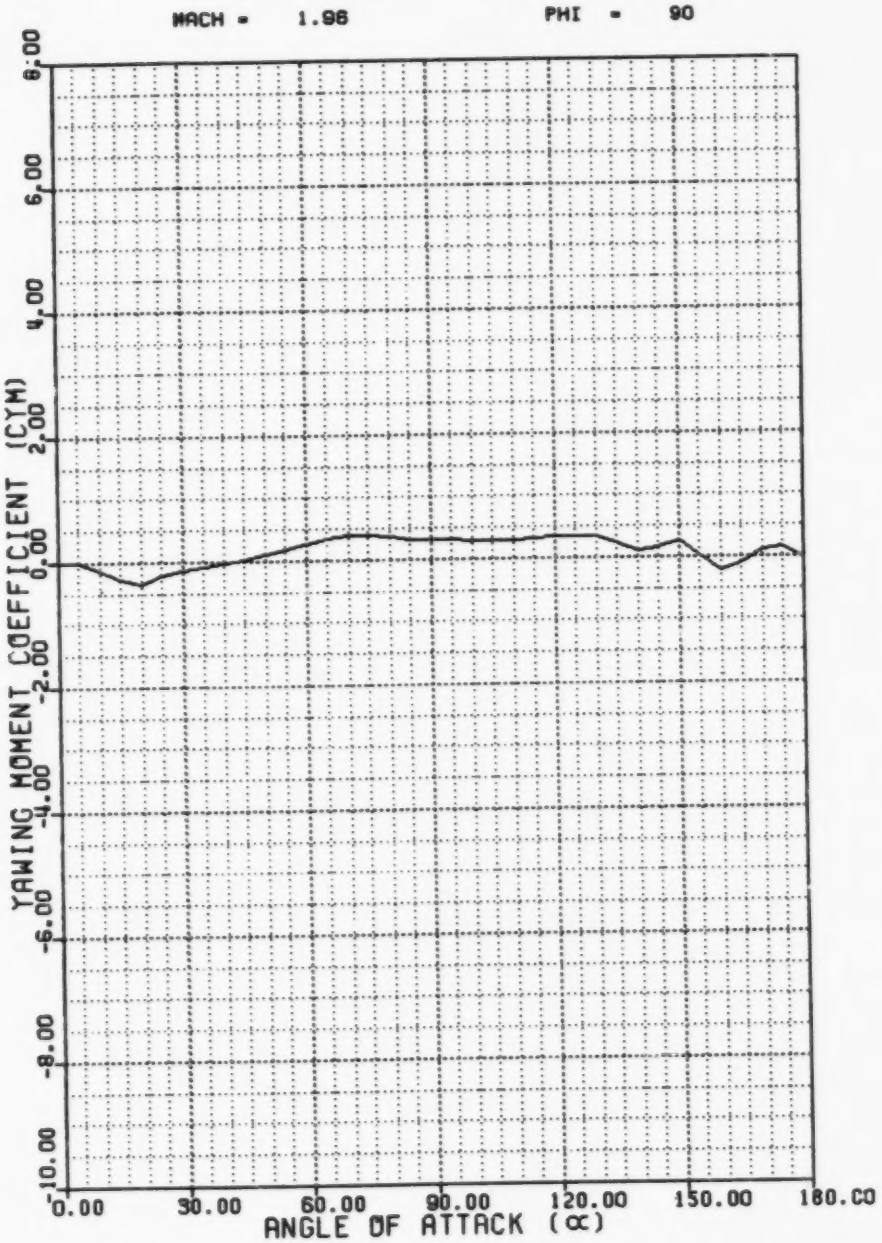
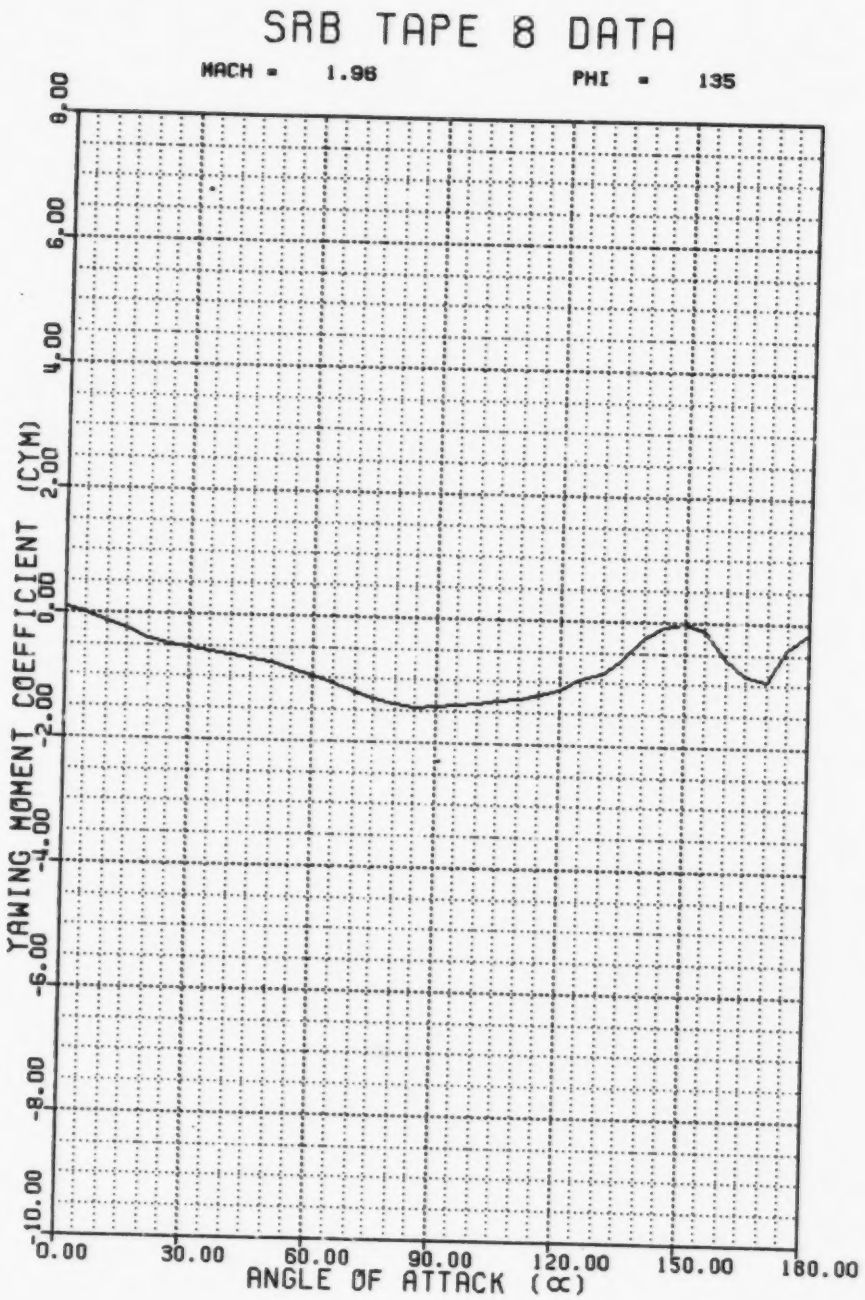
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.98 PHI = 90




SRB TAPE 8 DATA
MACH = 1.98
PHI = 135
YAWING MOMENT COEFFICIENT (CYM)
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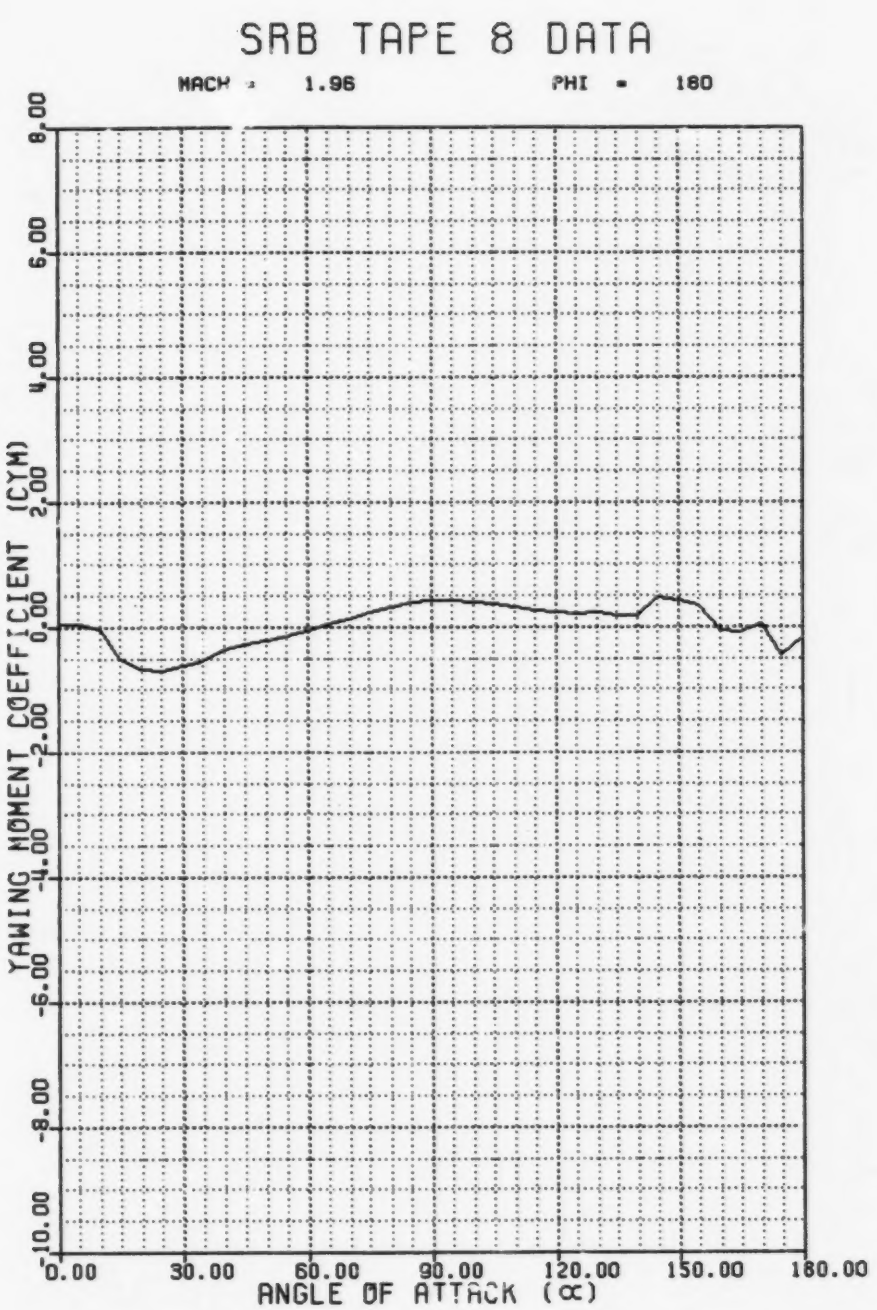
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 180
YAWING MOMENT COEFFICIENT (CYM)
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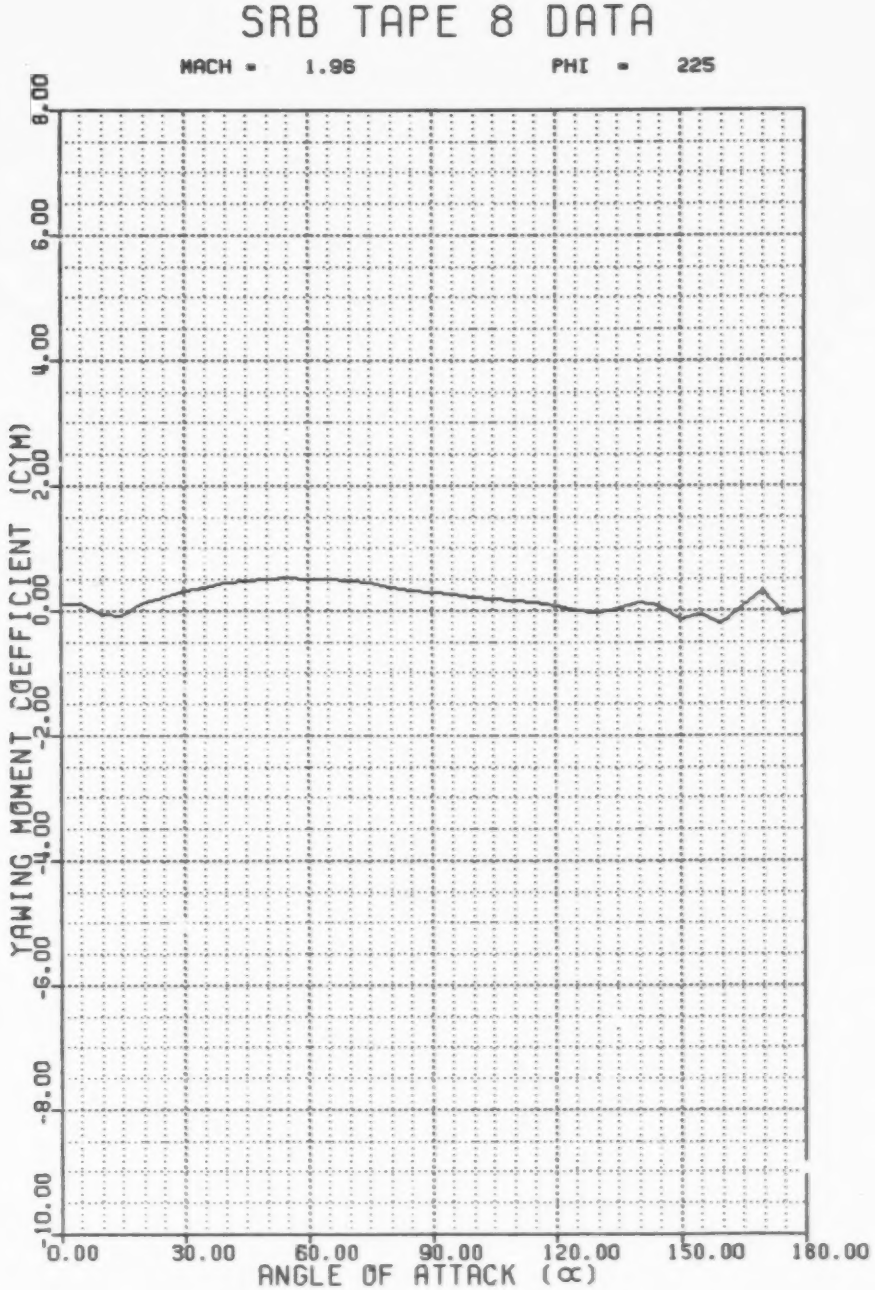
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
YAWING MOMENT COEFFICIENT (CYM)
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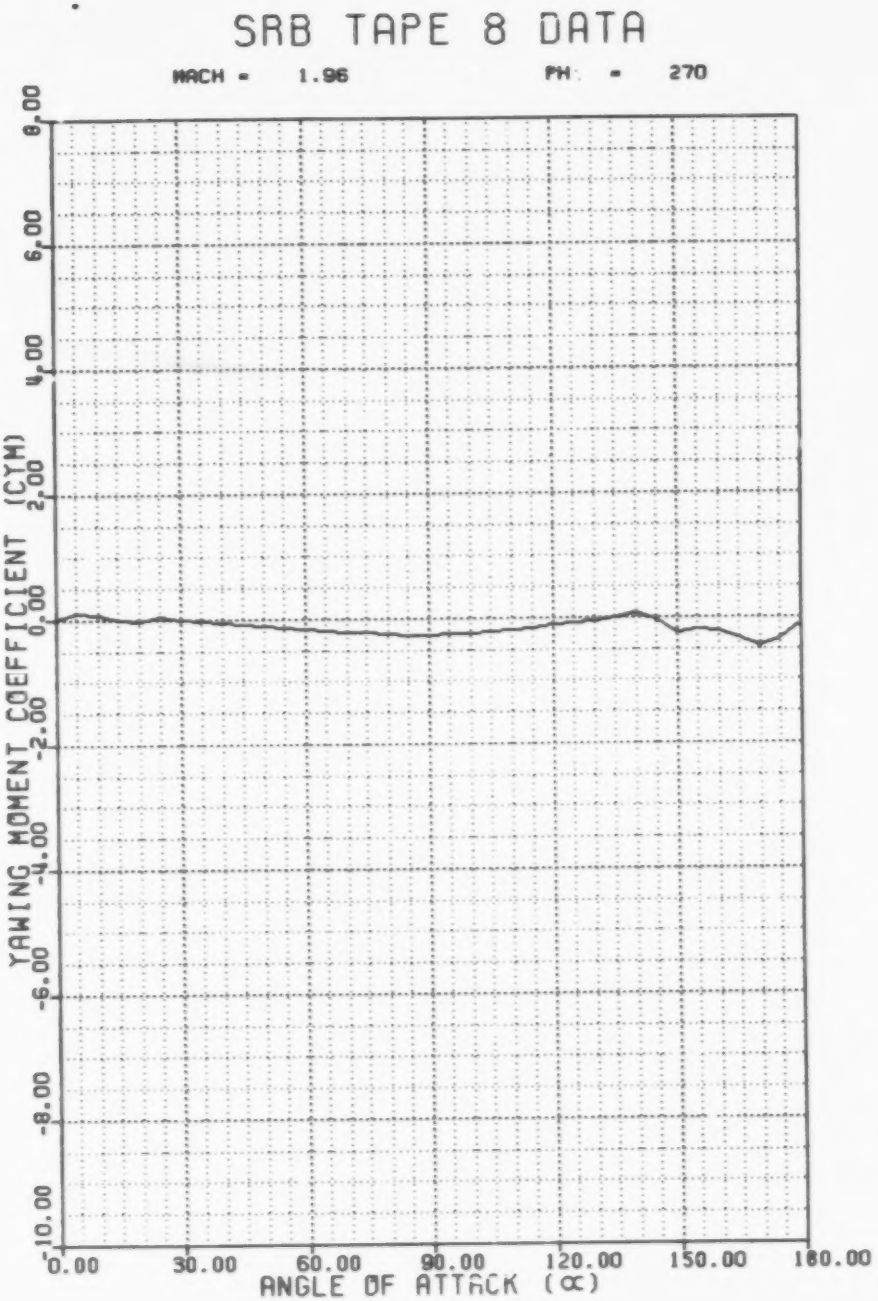
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PH = 270
YAWING MOMENT COEFFICIENT (CYM)
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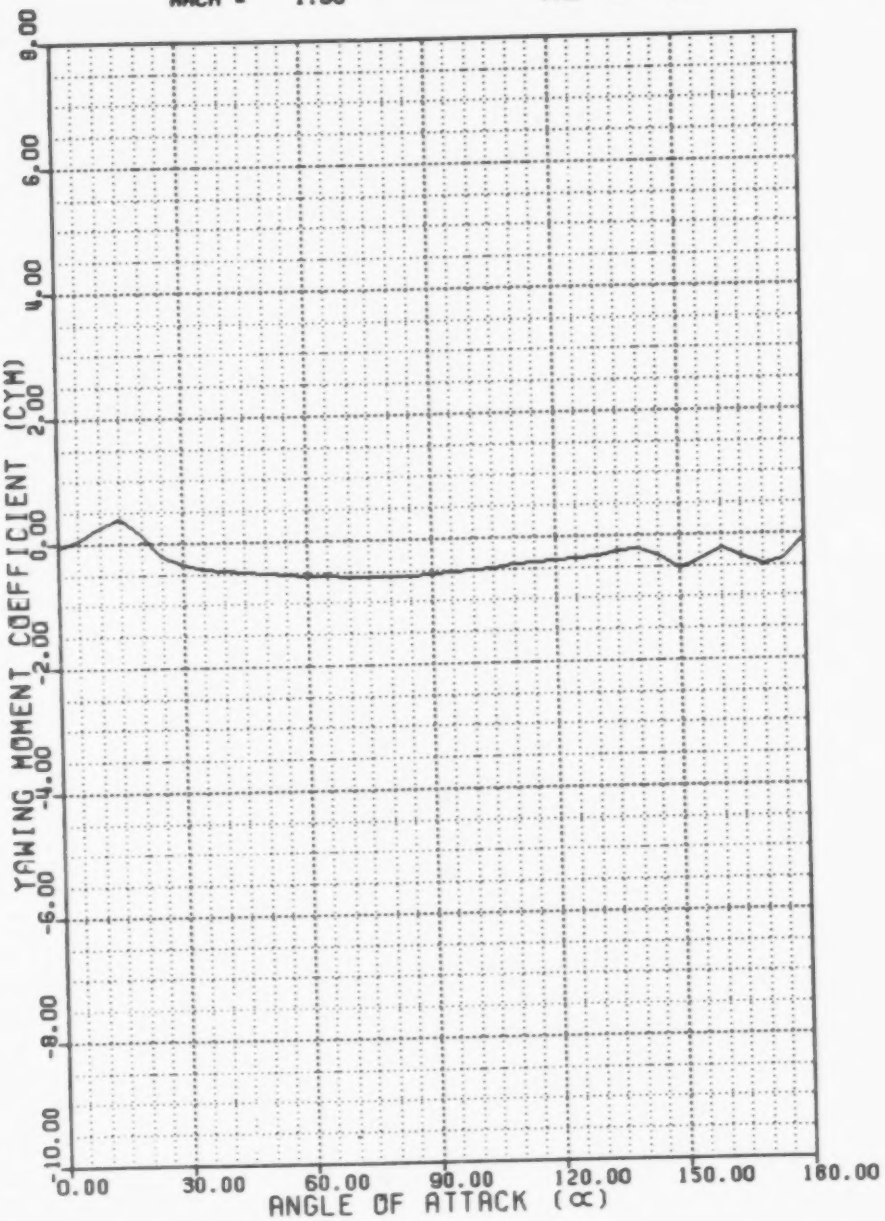
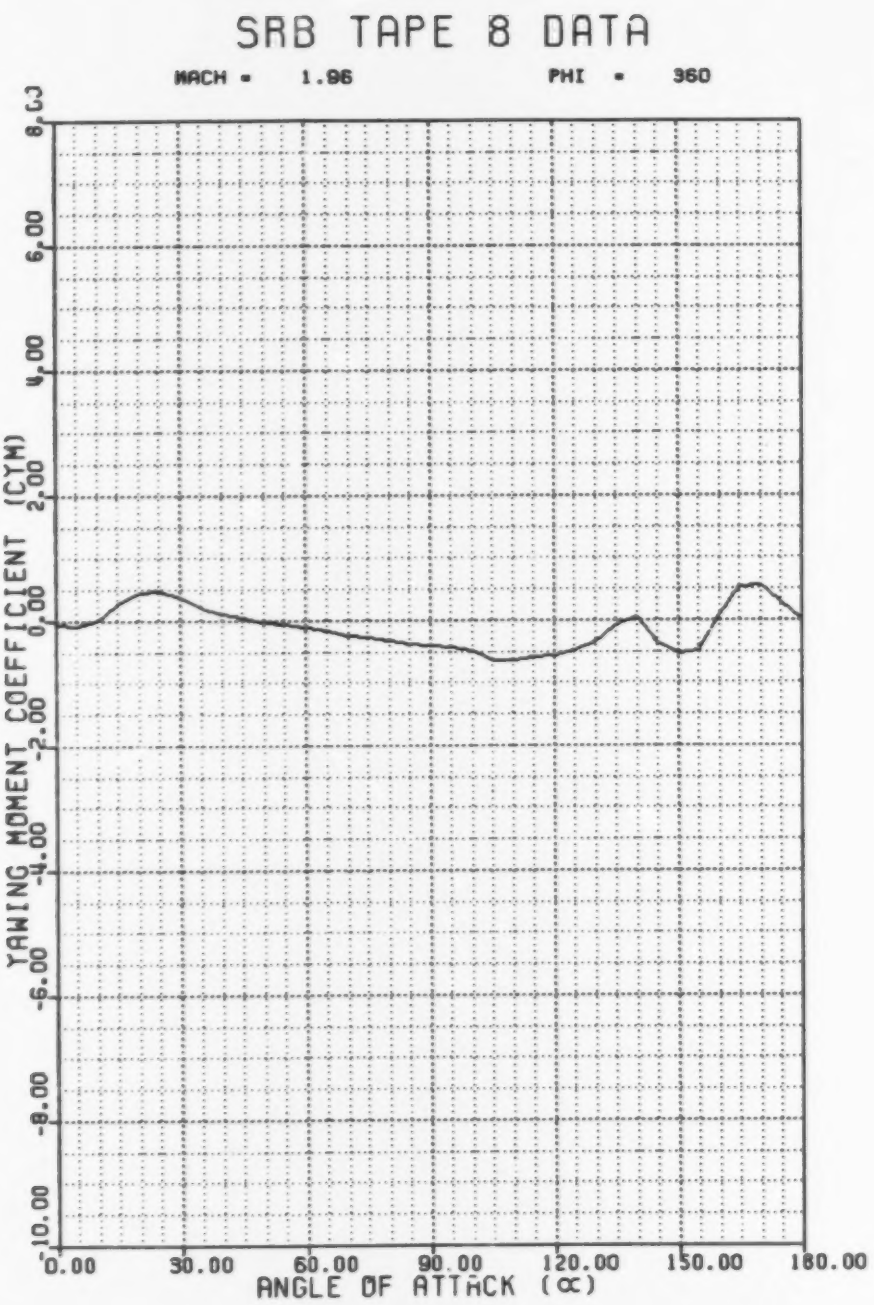
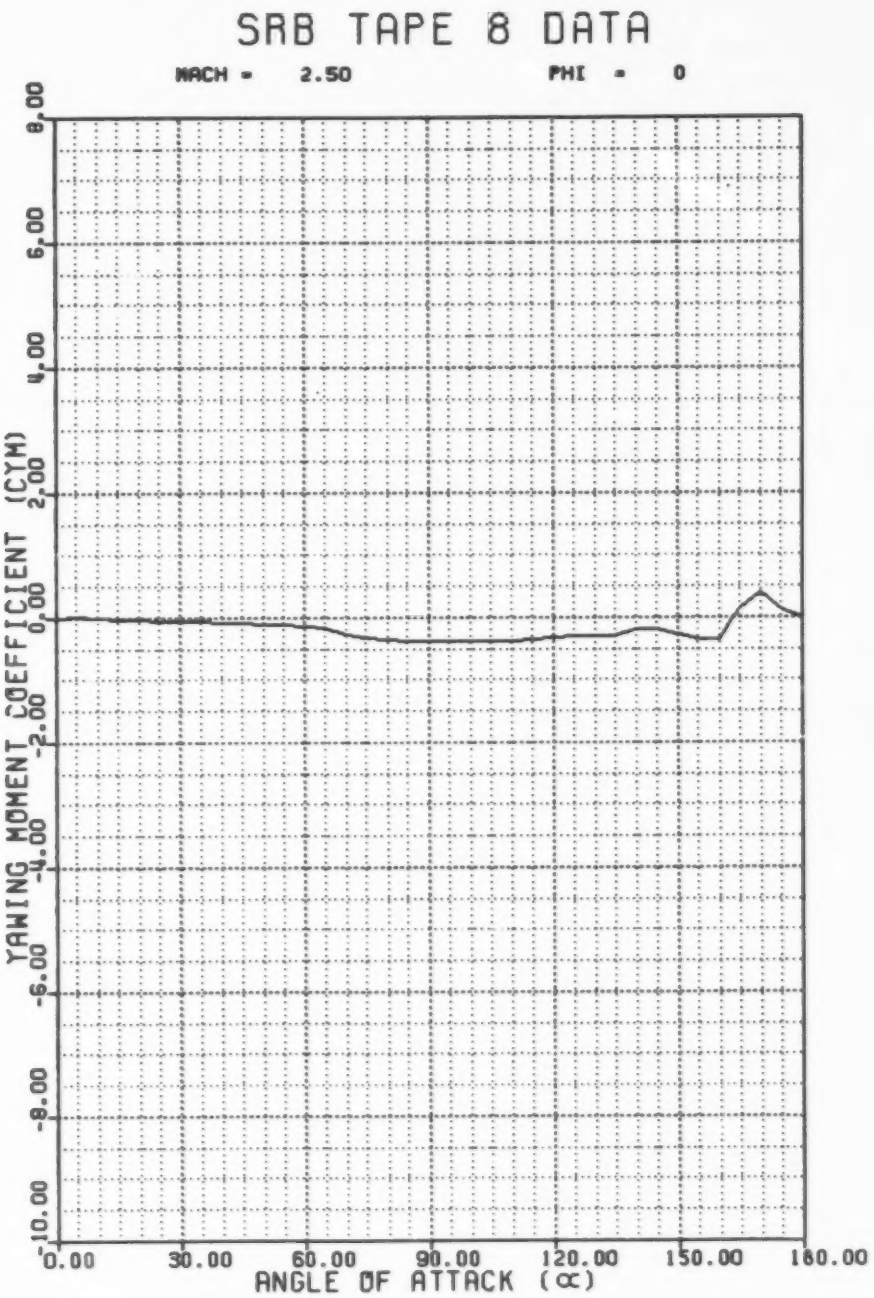
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.96 PHI = 315




SRB TAPE 8 DATA
MACH = 1.96
PHI = 360
YAWING MOMENT COEFFICIENT (CYM)
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 0
YAWING MOMENT COEFFICIENT (CYM)
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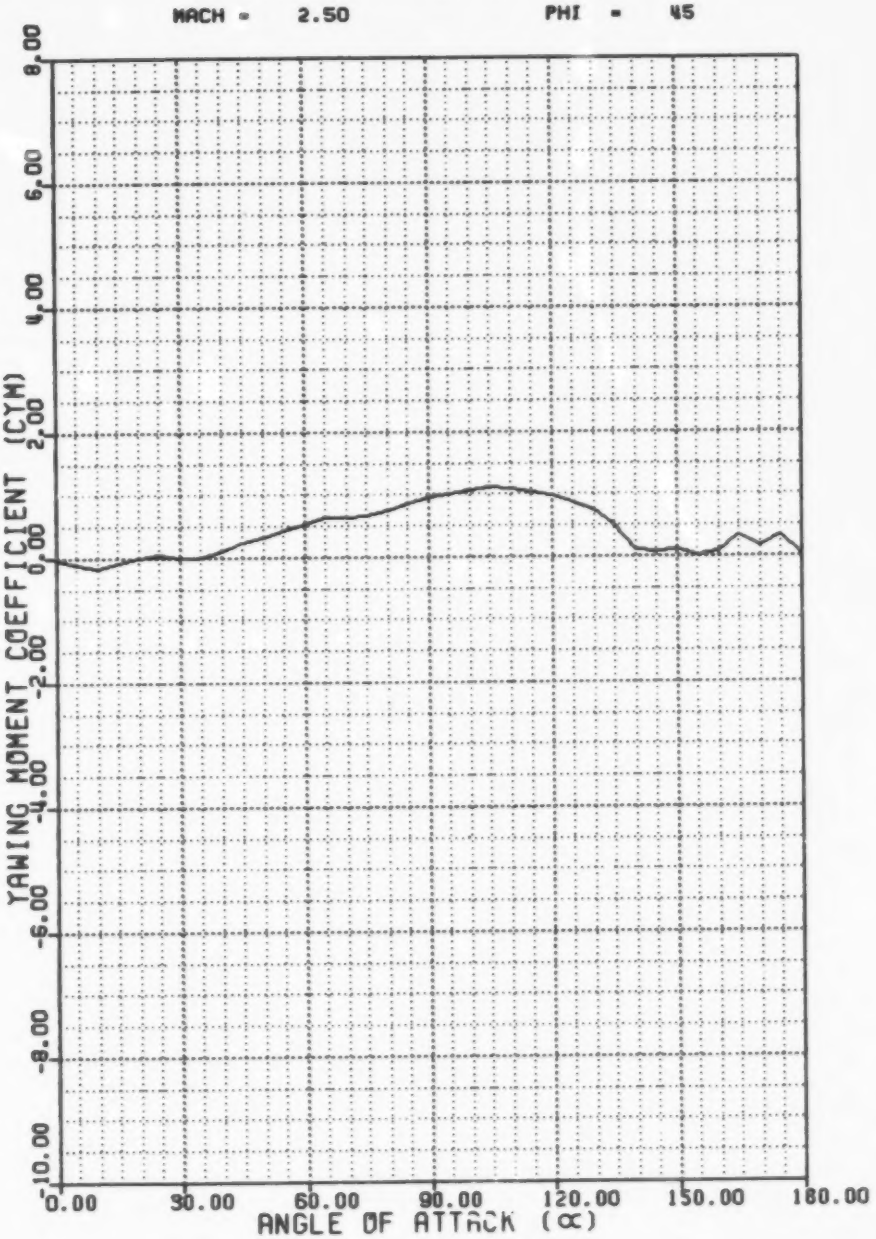
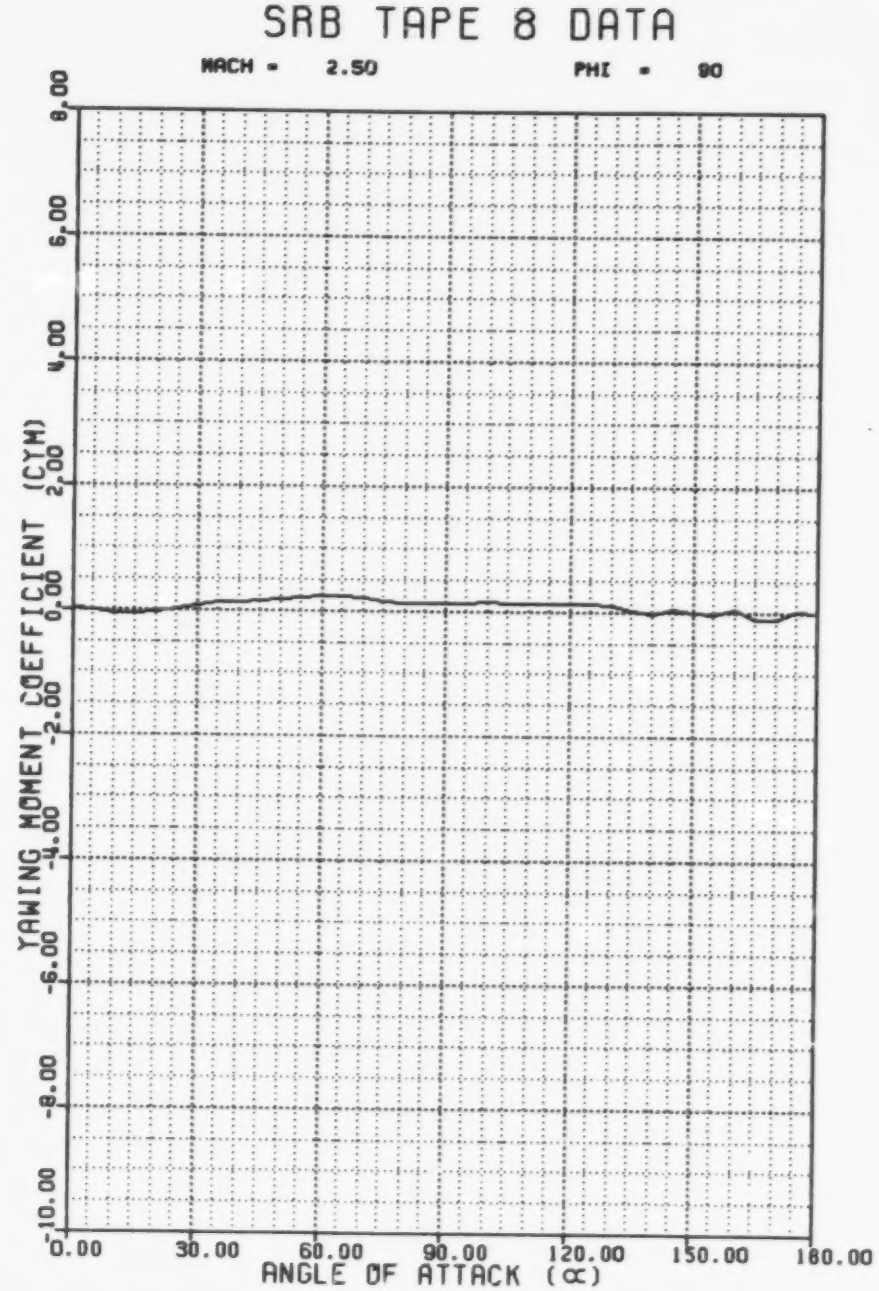
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 2.50 PHI = 45




SRB TAPE 8 DATA
MACH = 2.50
PHI = 90
YAWING MOMENT COEFFICIENT (CYM)
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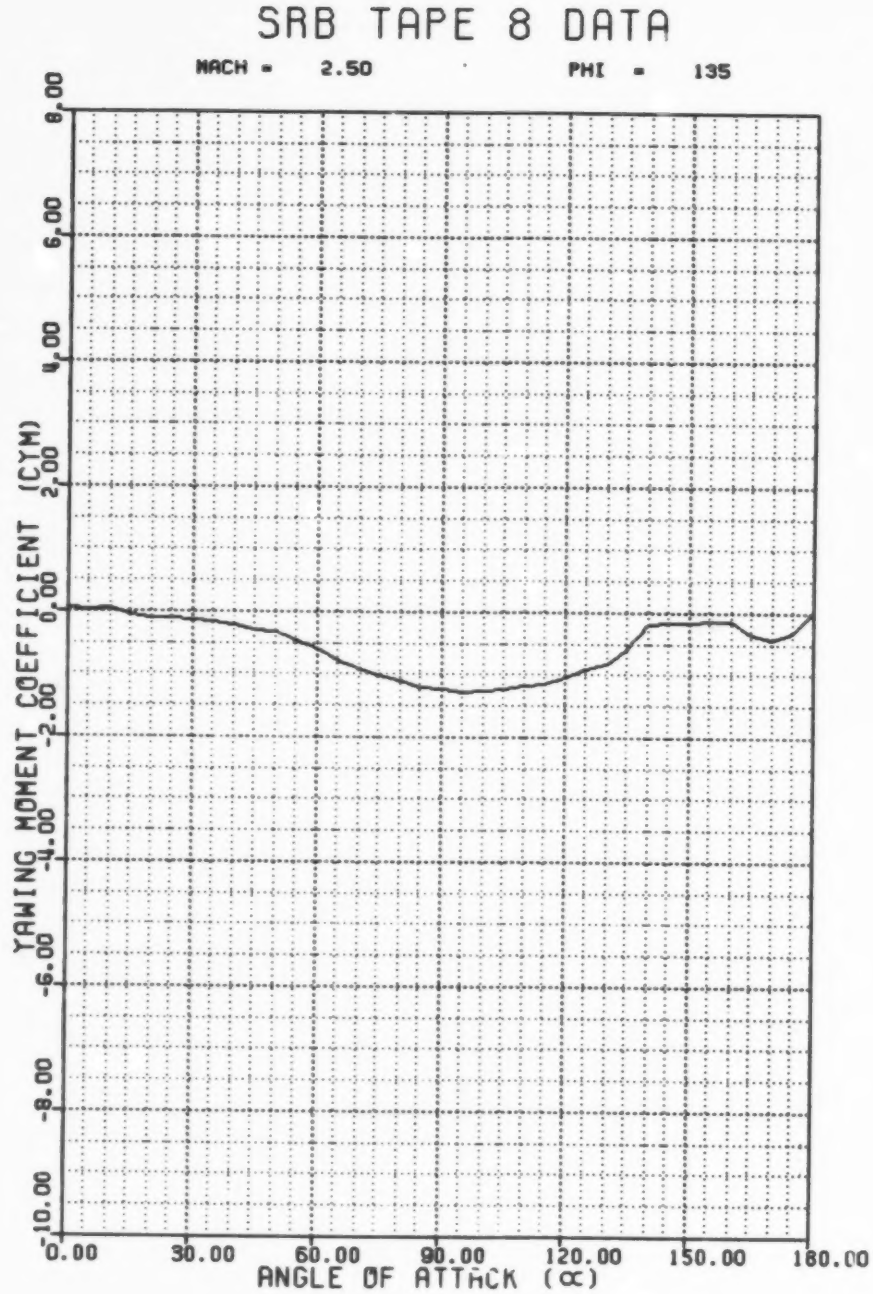
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 135
YAWING MOMENT COEFFICIENT (CYM)
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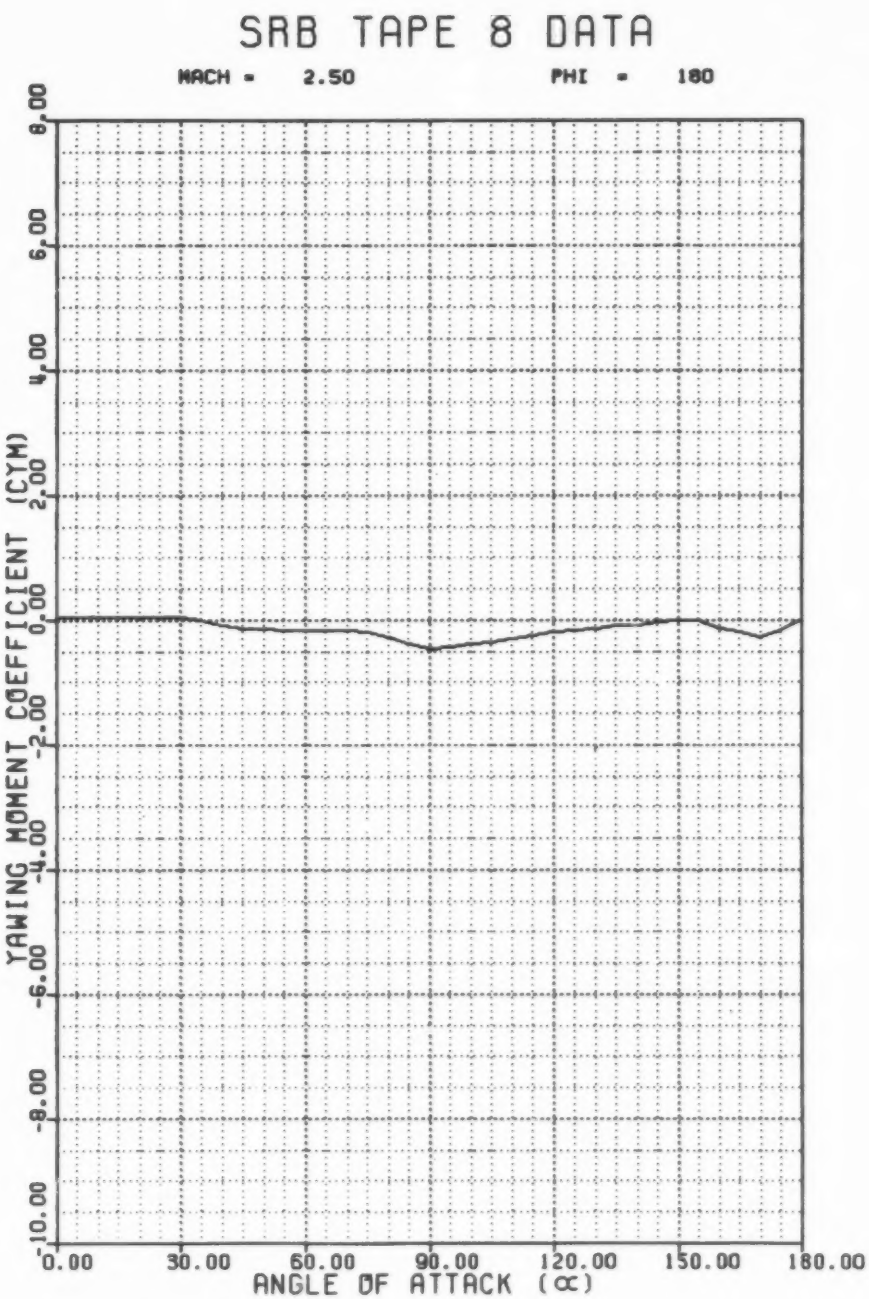
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 180
YAWING MOMENT COEFFICIENT (CYM)
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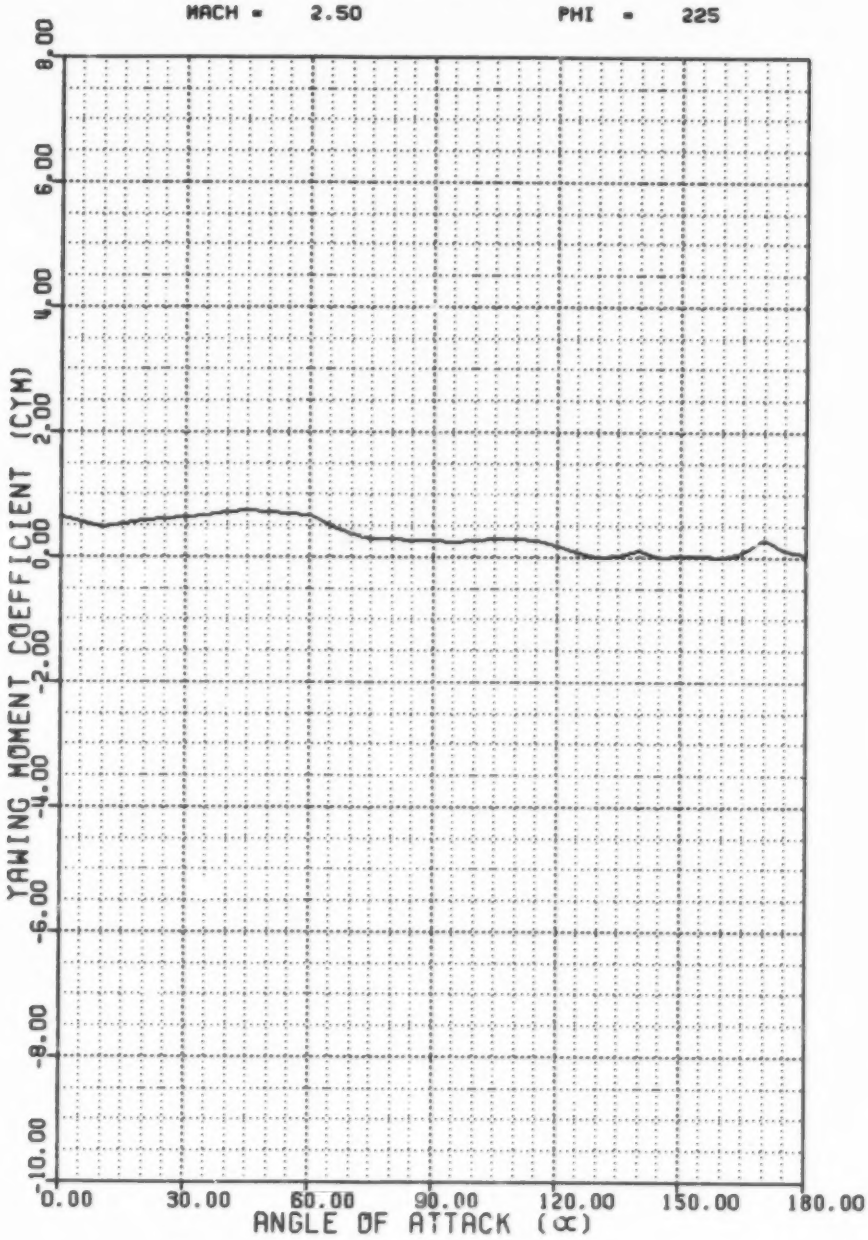
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 2.50 PHI = 225



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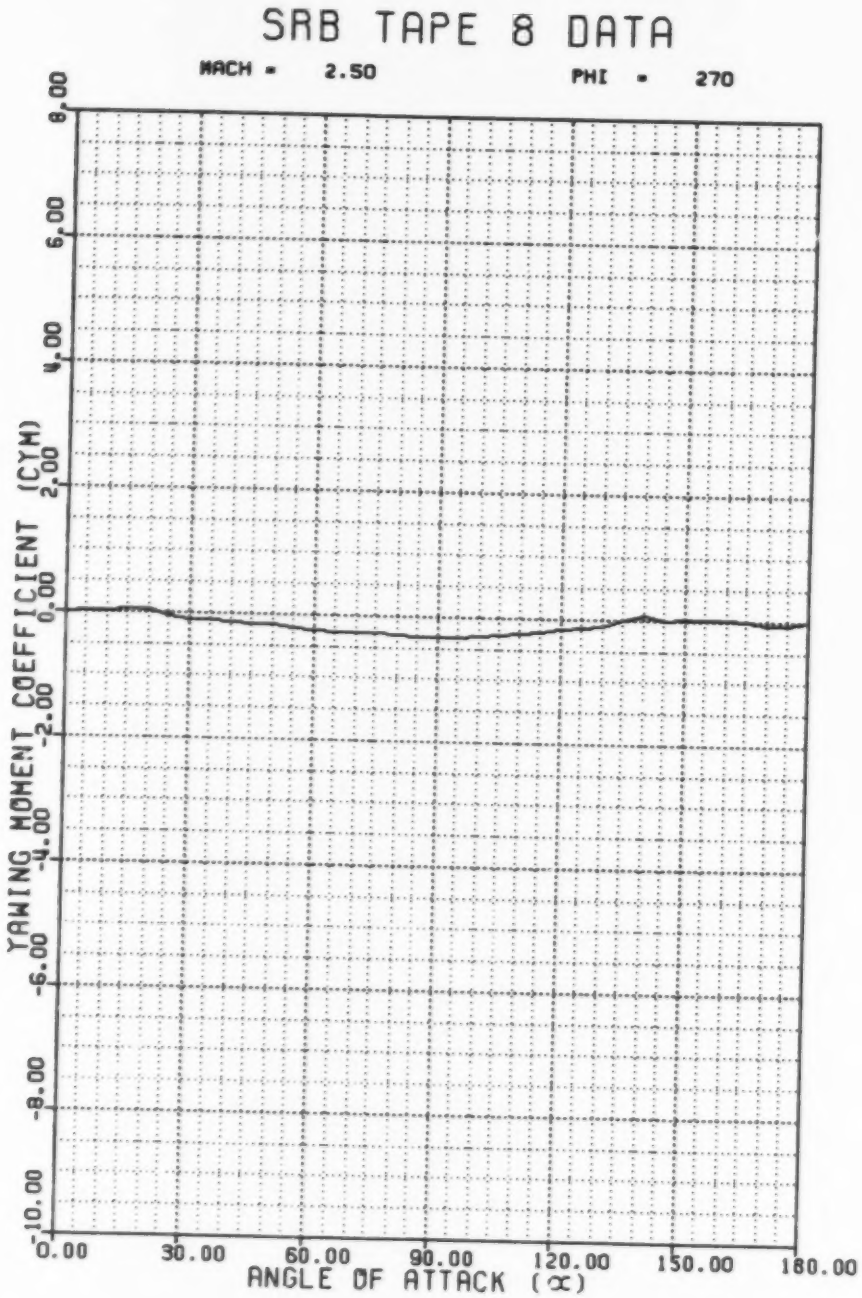
LOCKHEED-HUNTSVILLE ENGINEERING CENTER


SRB TAPE 8 DATA
MACH = 2.50
PHI = 270
YAWING MOMENT COEFFICIENT (CYM)
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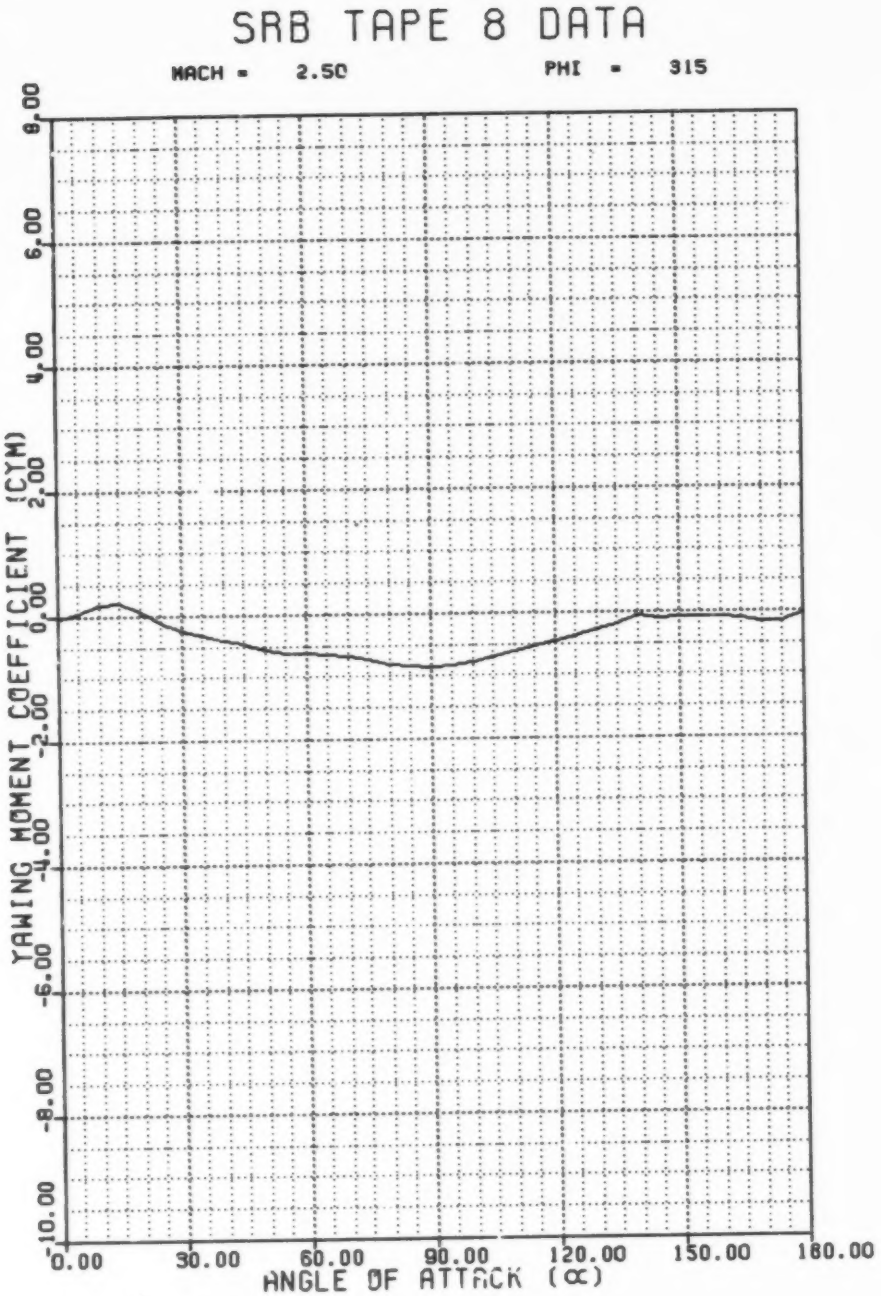
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 315
YAWING MOMENT COEFFICIENT (CYM)
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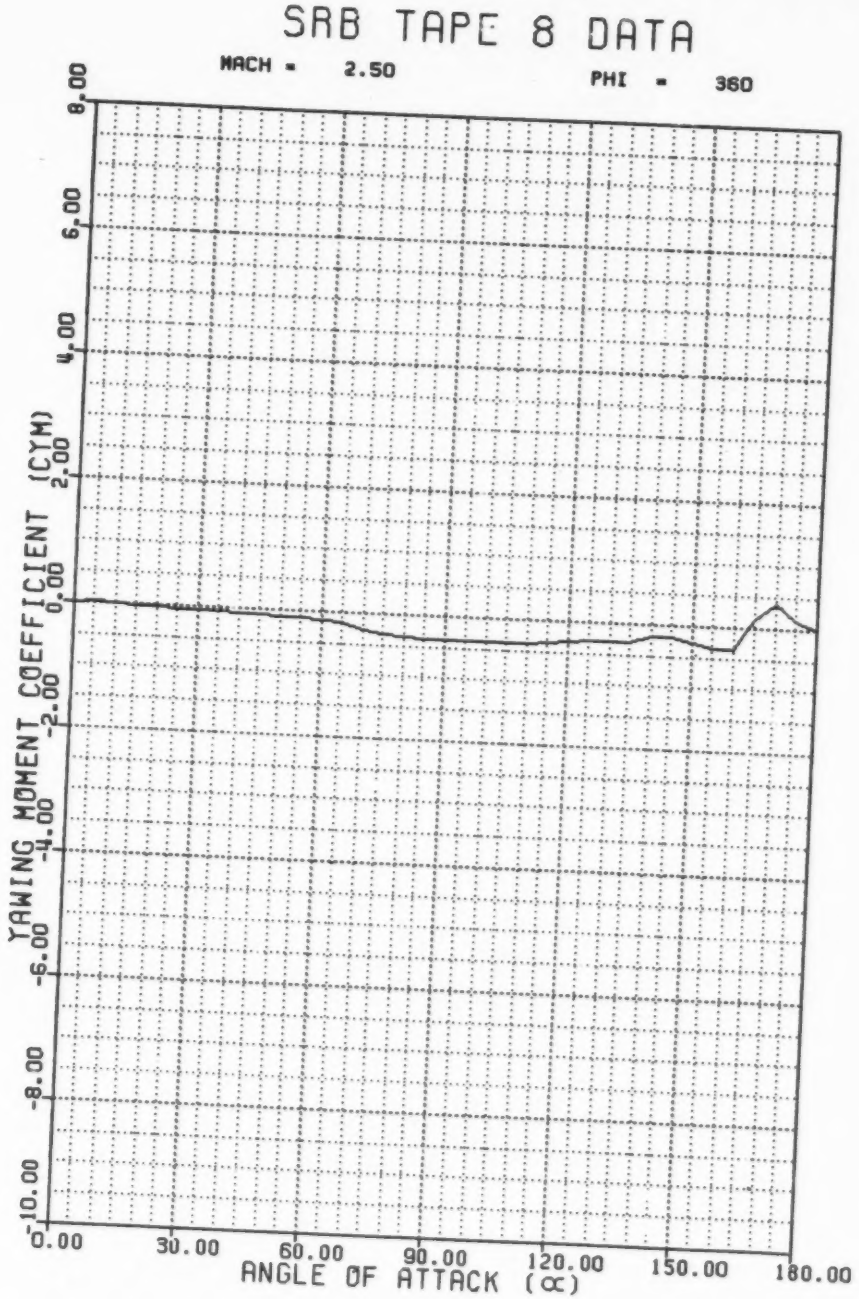
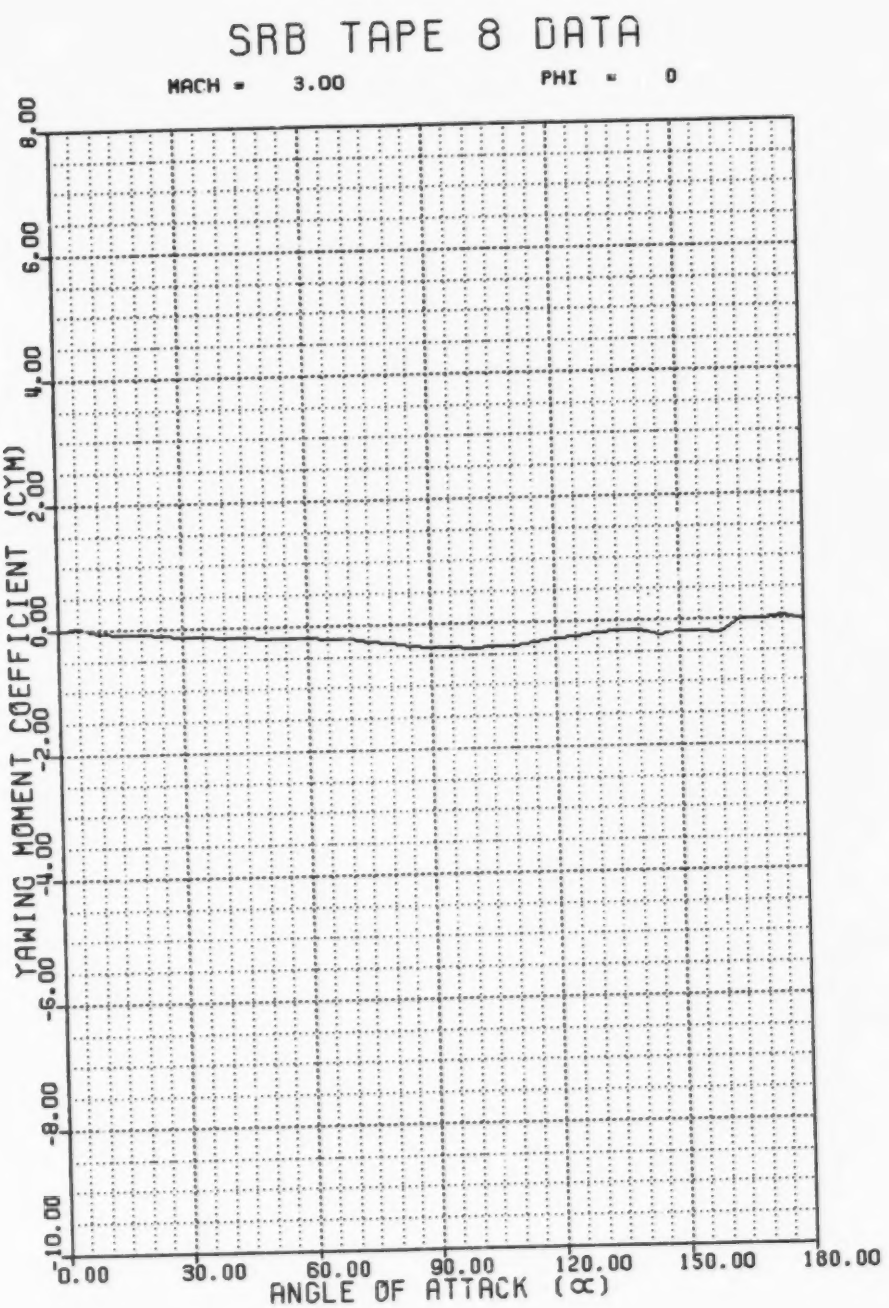
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 360
YAWING MOMENT COEFFICIENT (CYM)
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 0
YAWING MOMENT COEFFICIENT (CYM)
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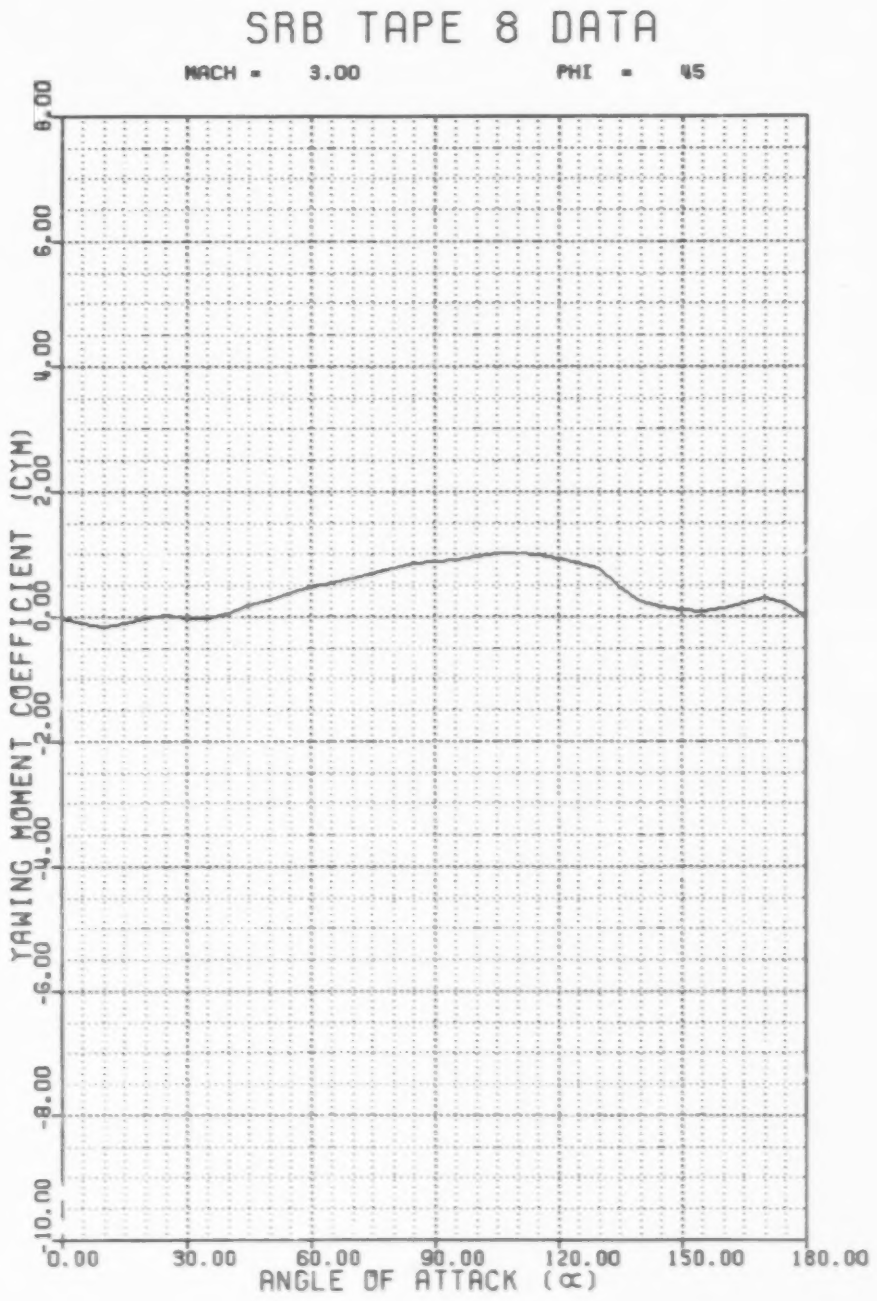
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 45
YAWING MOMENT COEFFICIENT (CYM)
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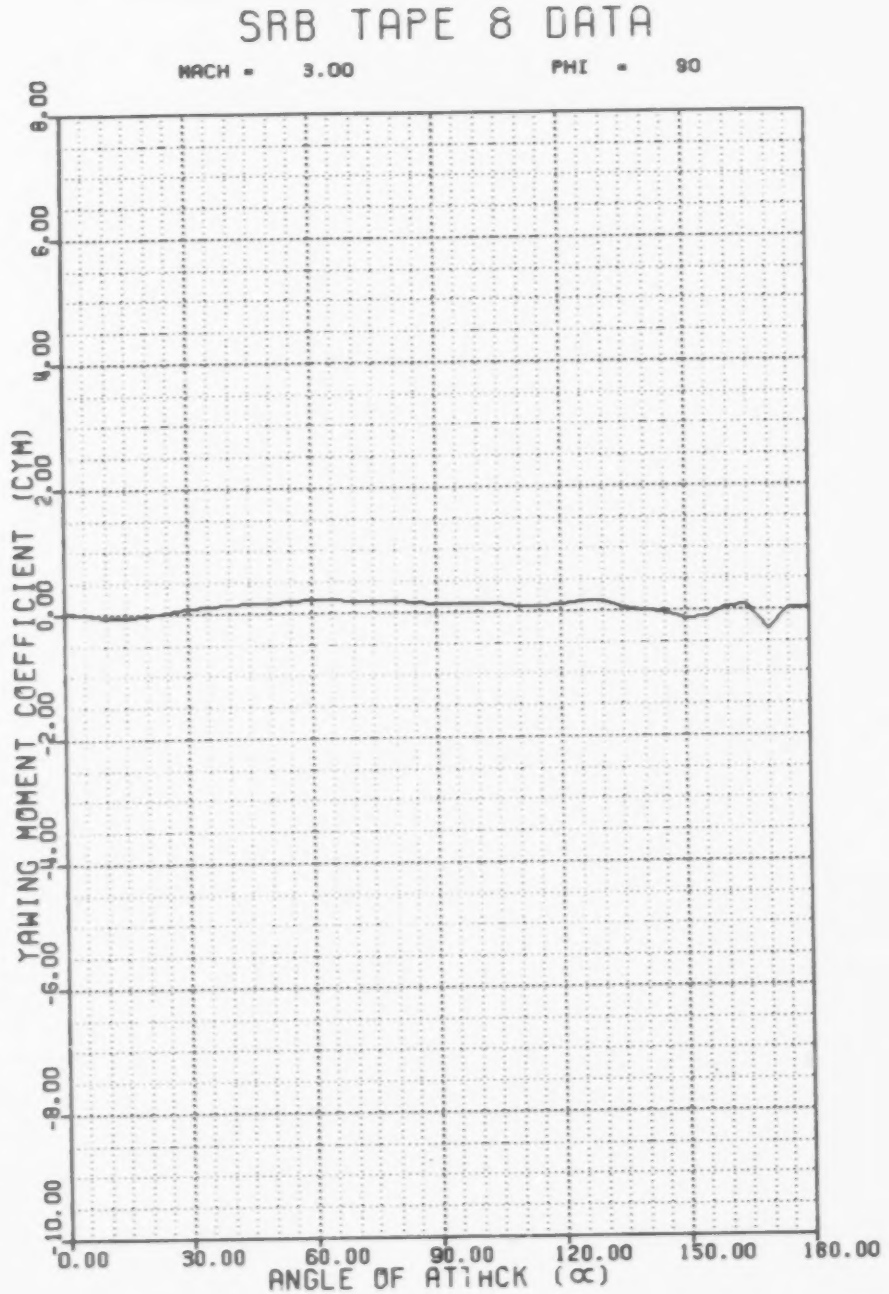
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
MACH = 3.00
PHI = 90
YAWING MOMENT COEFFICIENT (CYM)
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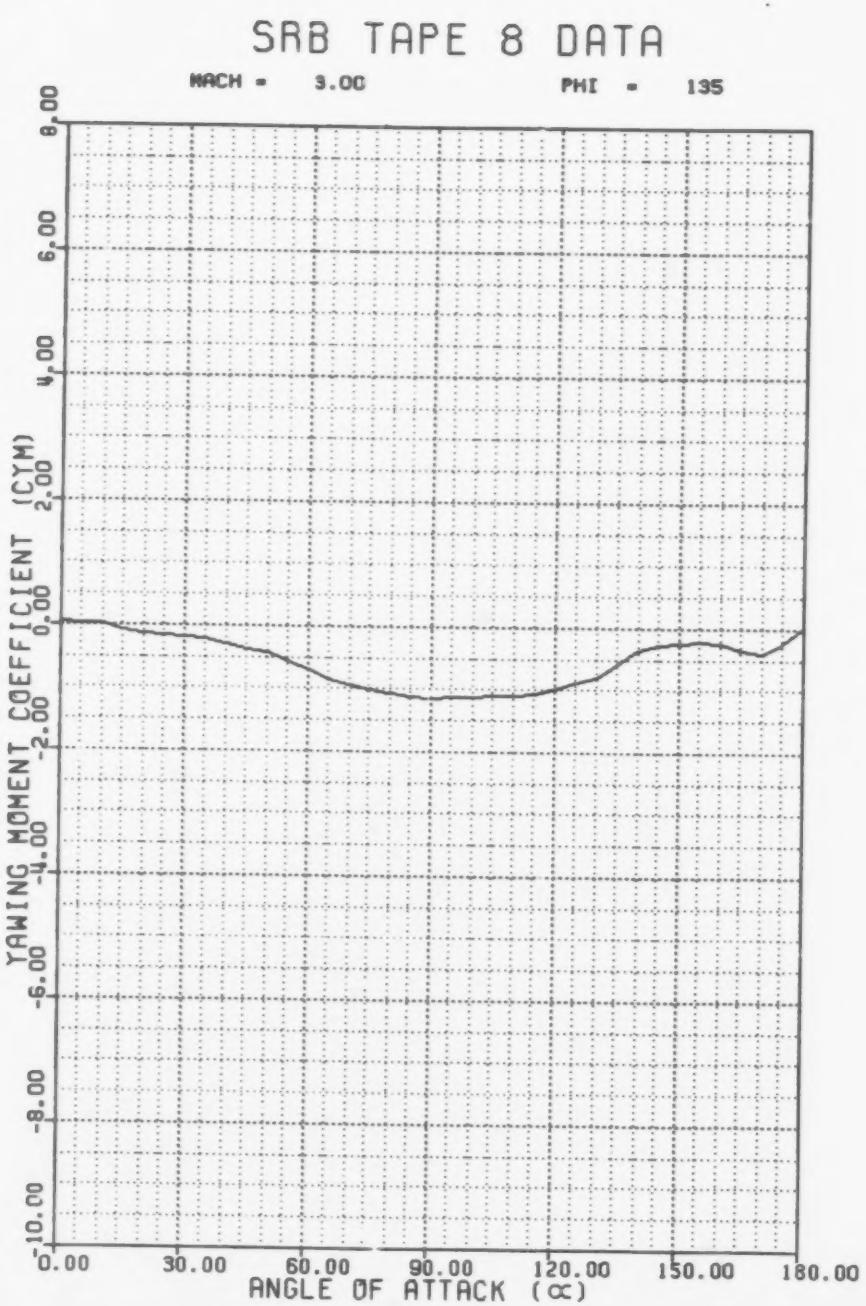
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 135
YAWING MOMENT COEFFICIENT (CYM)
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6.00
4.00
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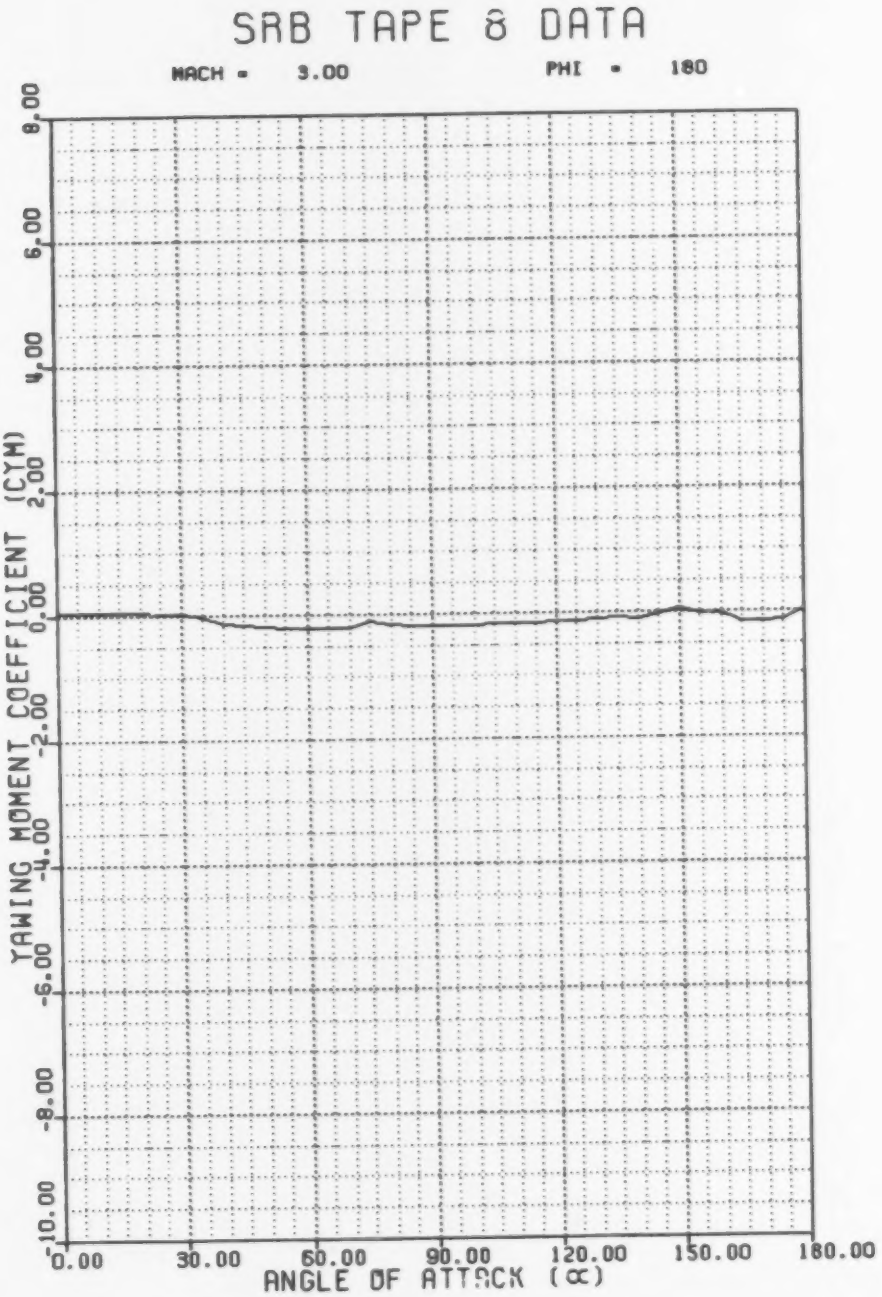
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
MACH = 3.00
PHI = 180
YAWING MOMENT COEFFICIENT (CYM)
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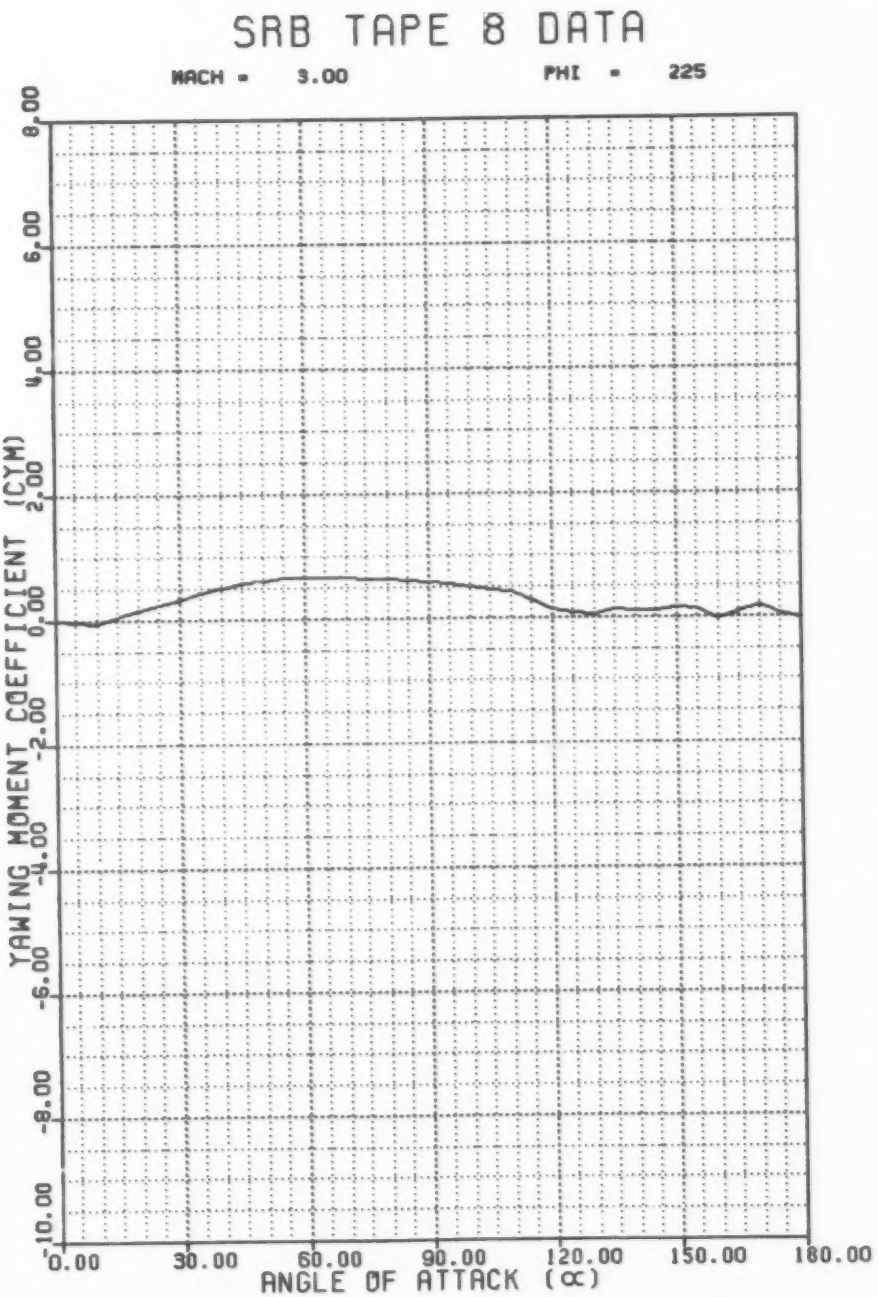
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 225
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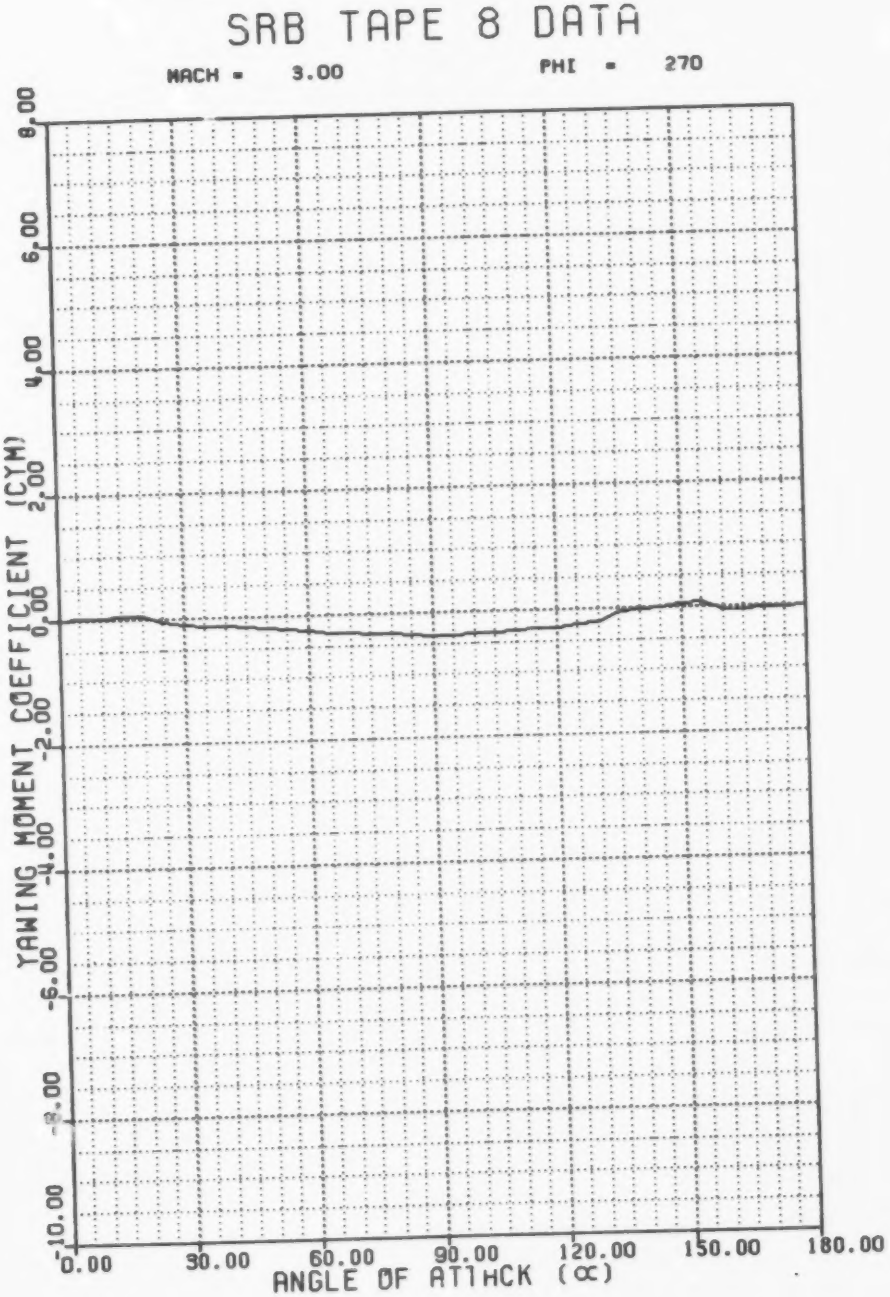
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 3.00
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4.00
2.00
0.00
-2.00
-4.00
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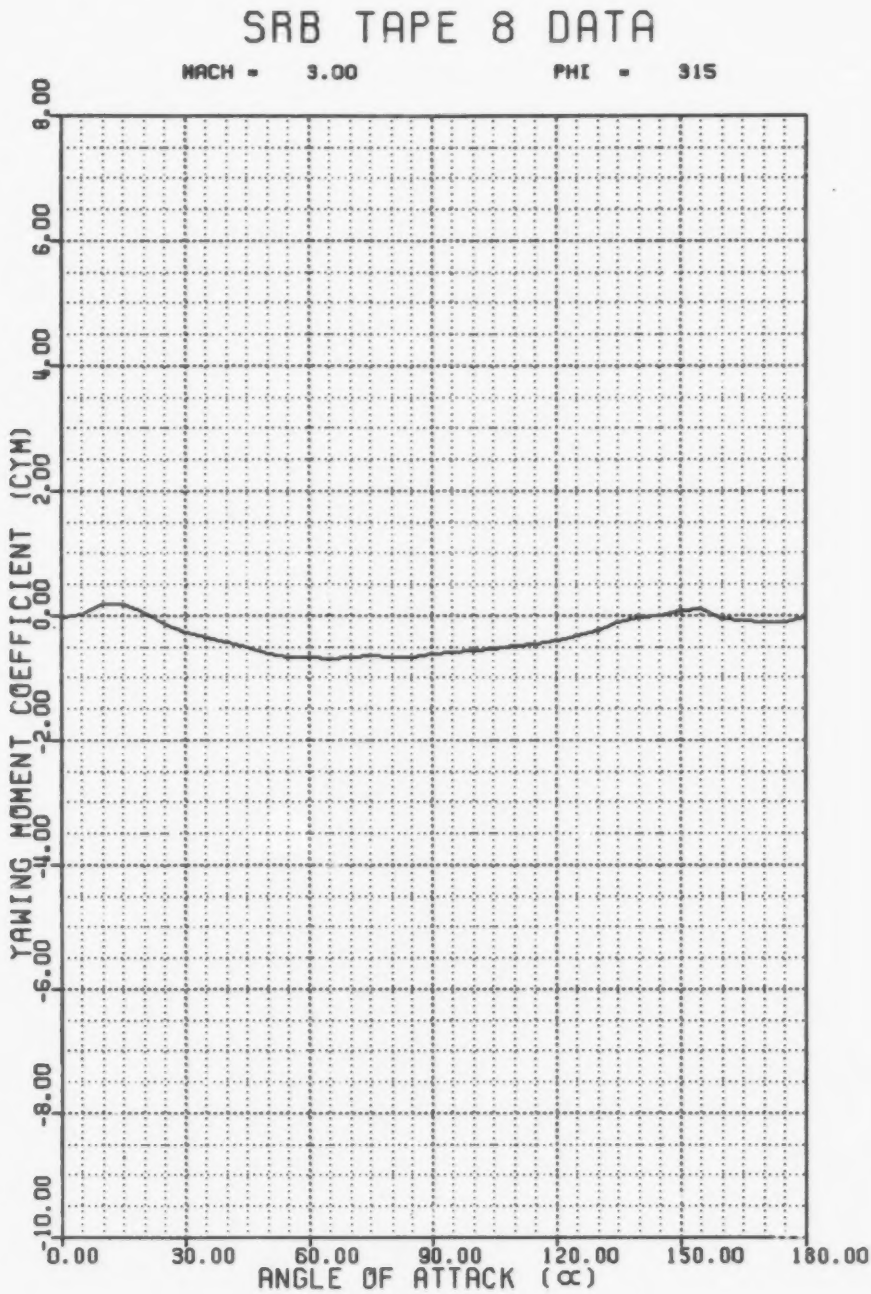
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 3.00
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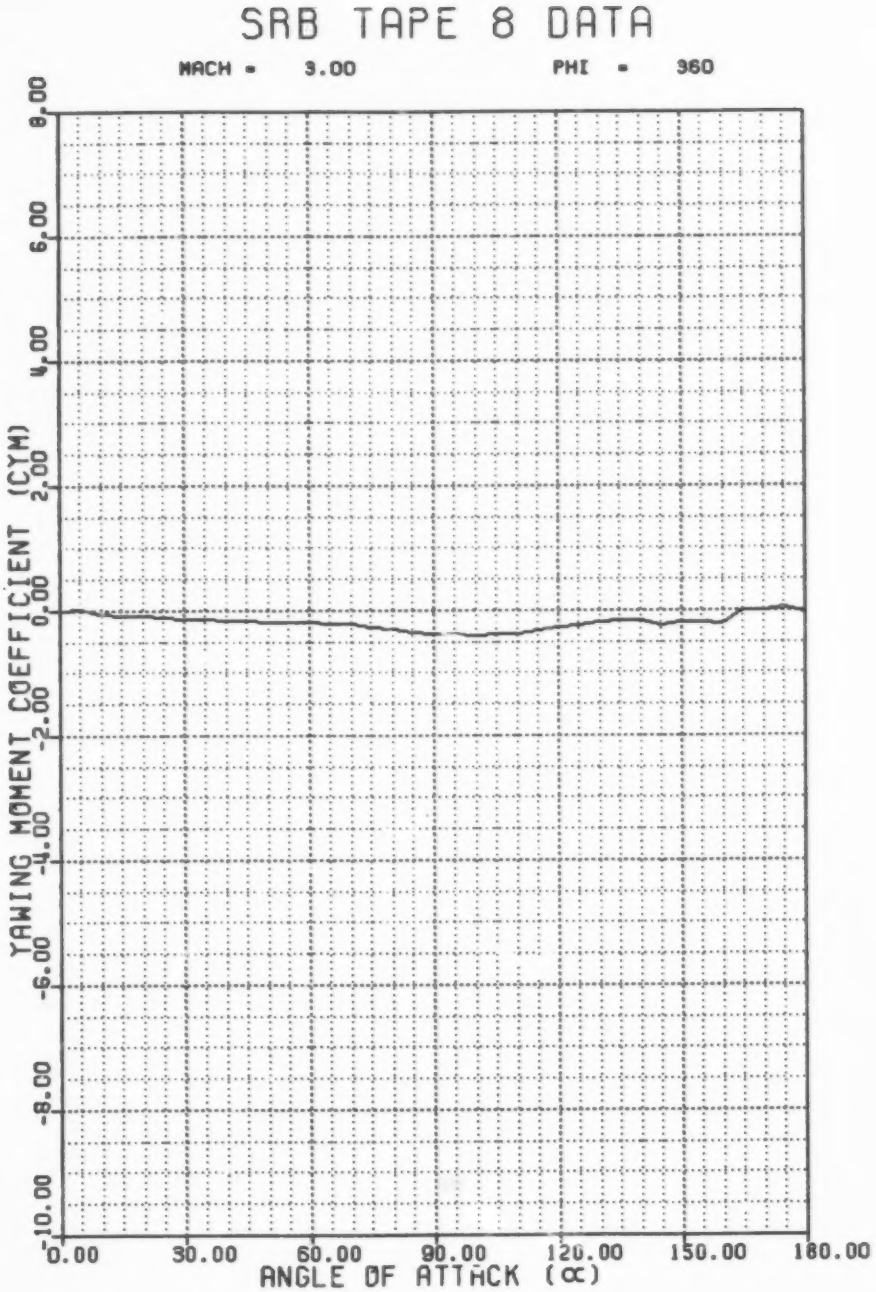
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 360
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4.00
2.00
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-2.00
-4.00
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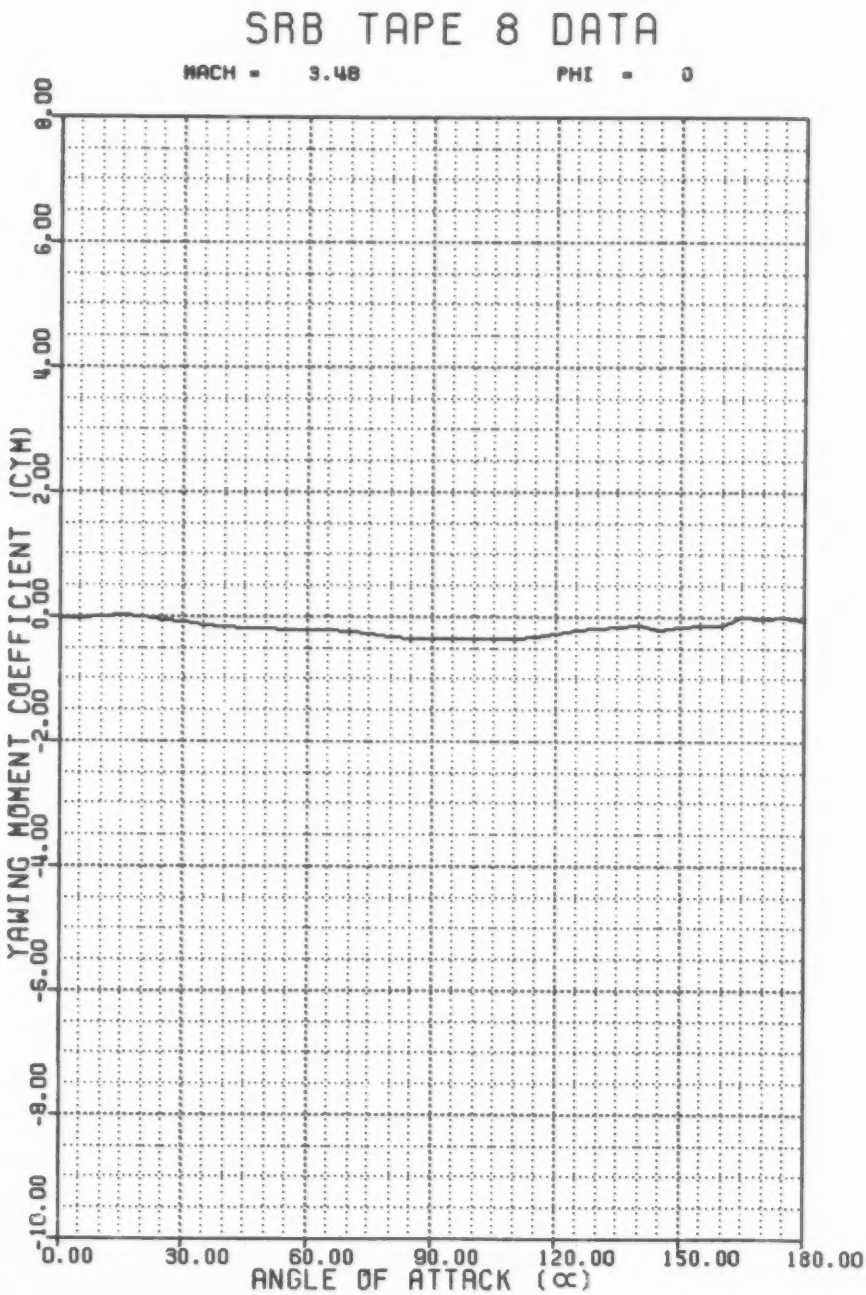
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 3.48
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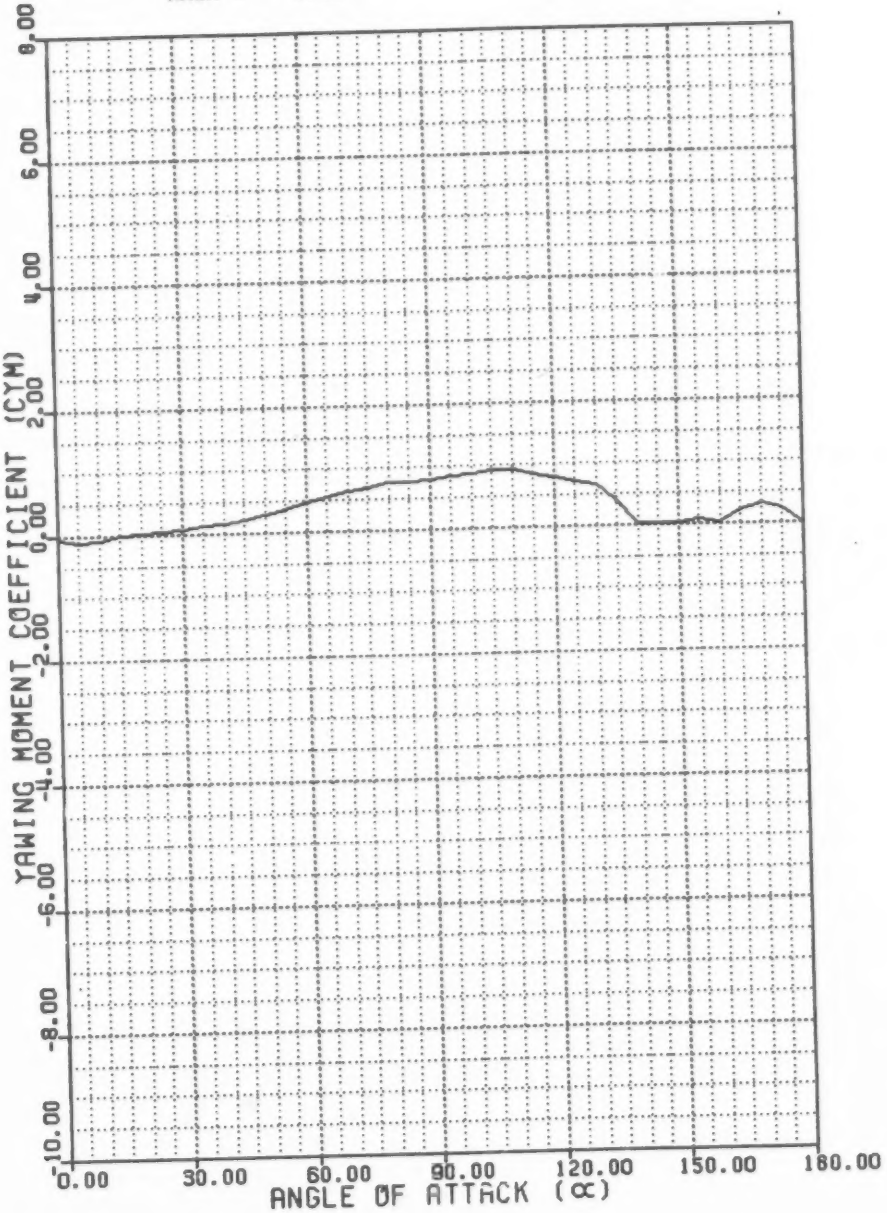
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 3.48 PHI = 45



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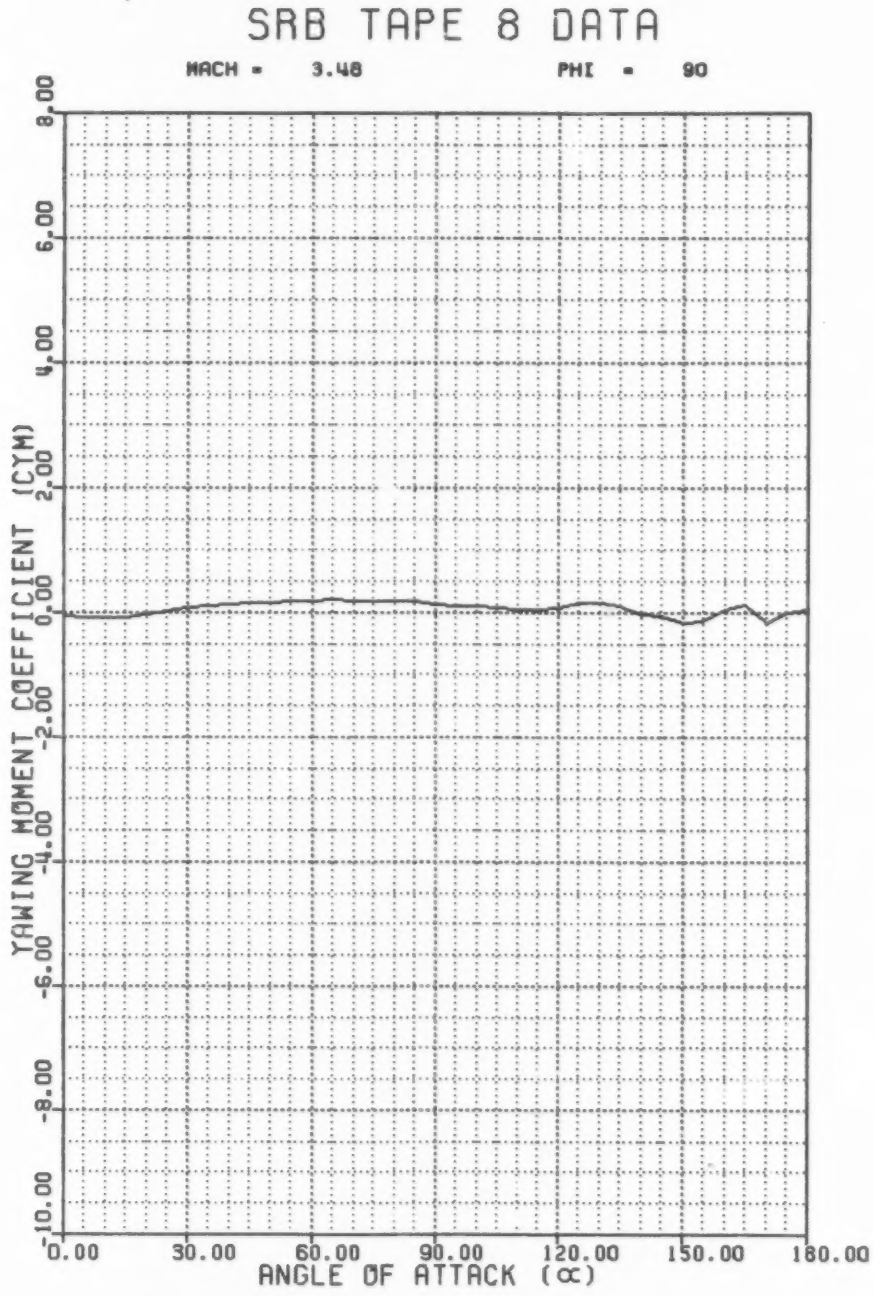
SRB TAPE 8 DATA
MACH = 3.48
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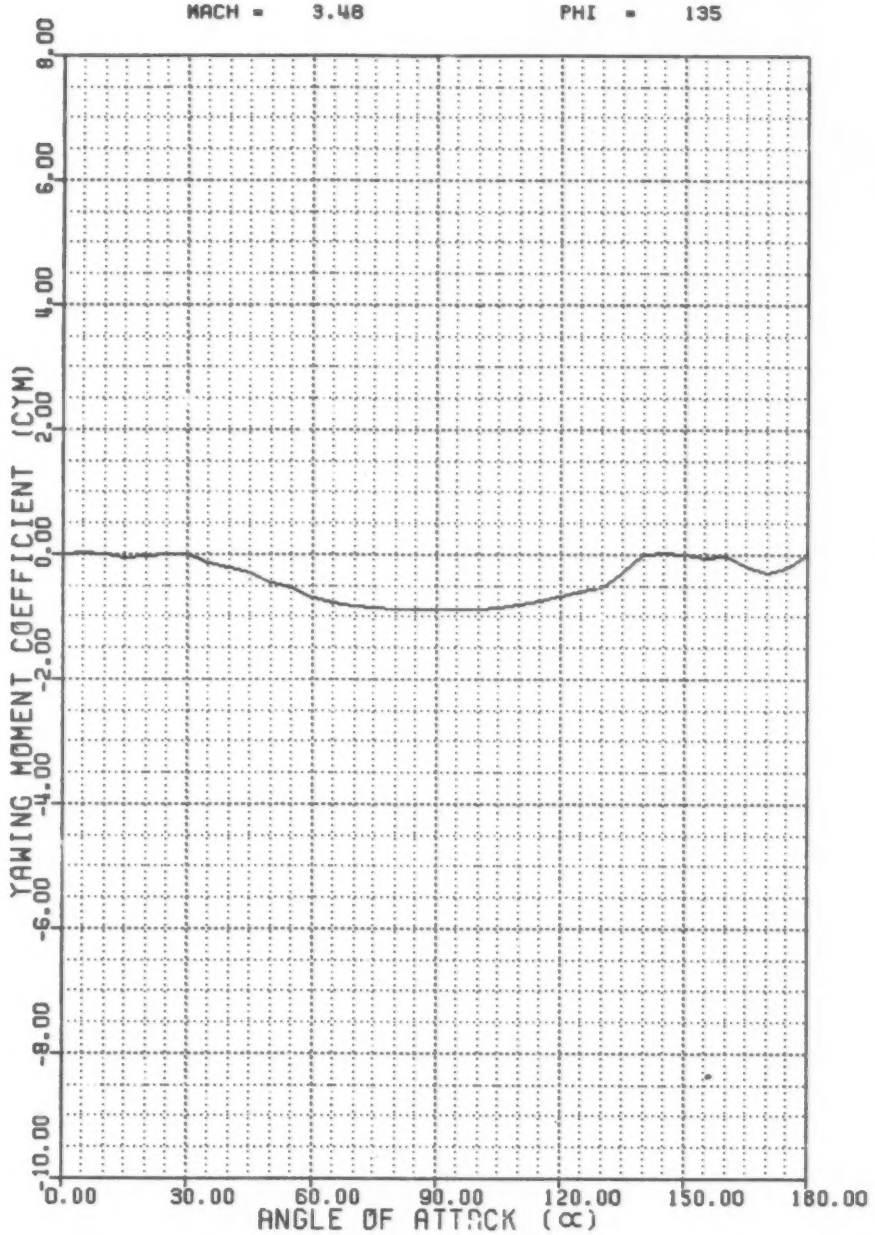
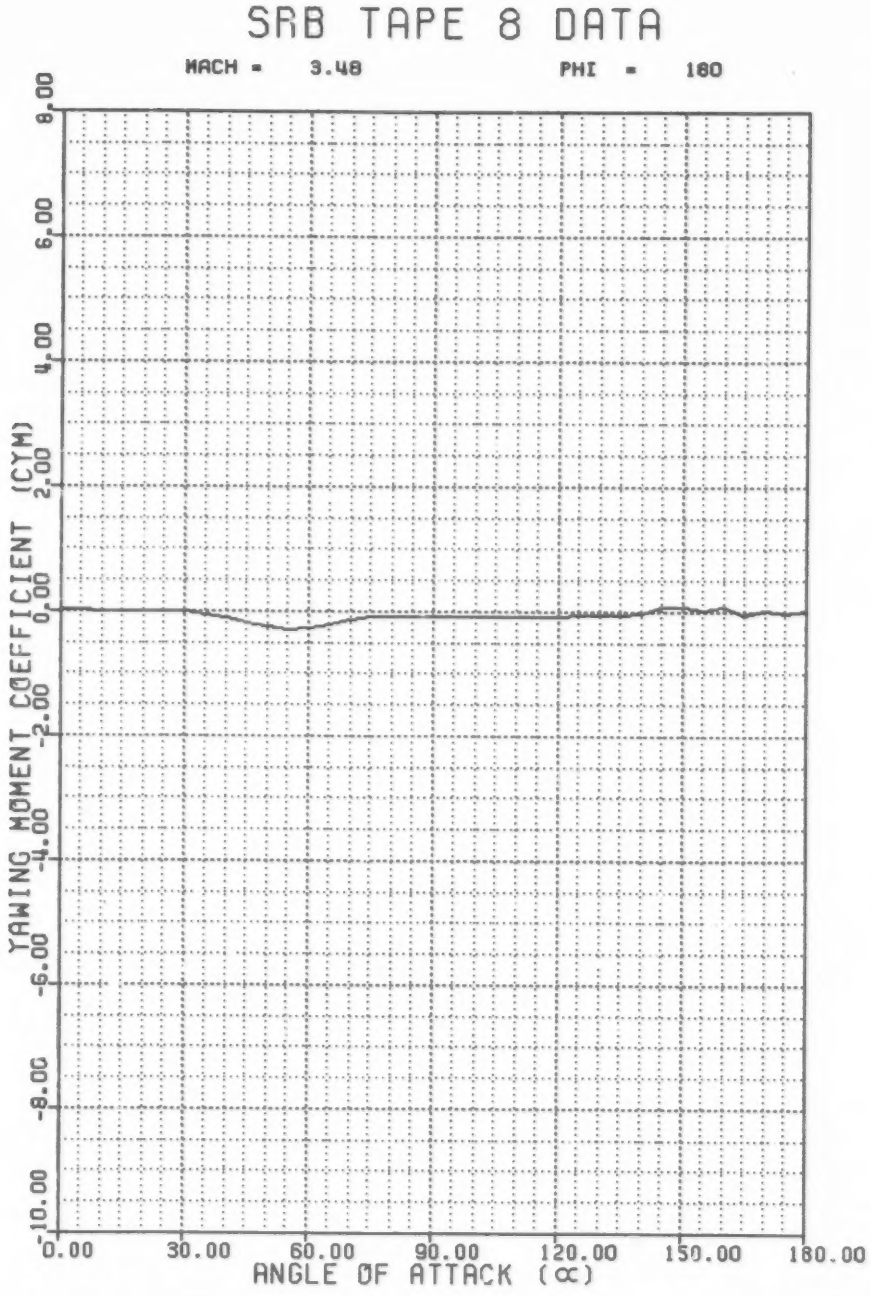
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 3.48 PHI = 135




SRB TAPE 8 DATA
MACH = 3.48
PHI = 180
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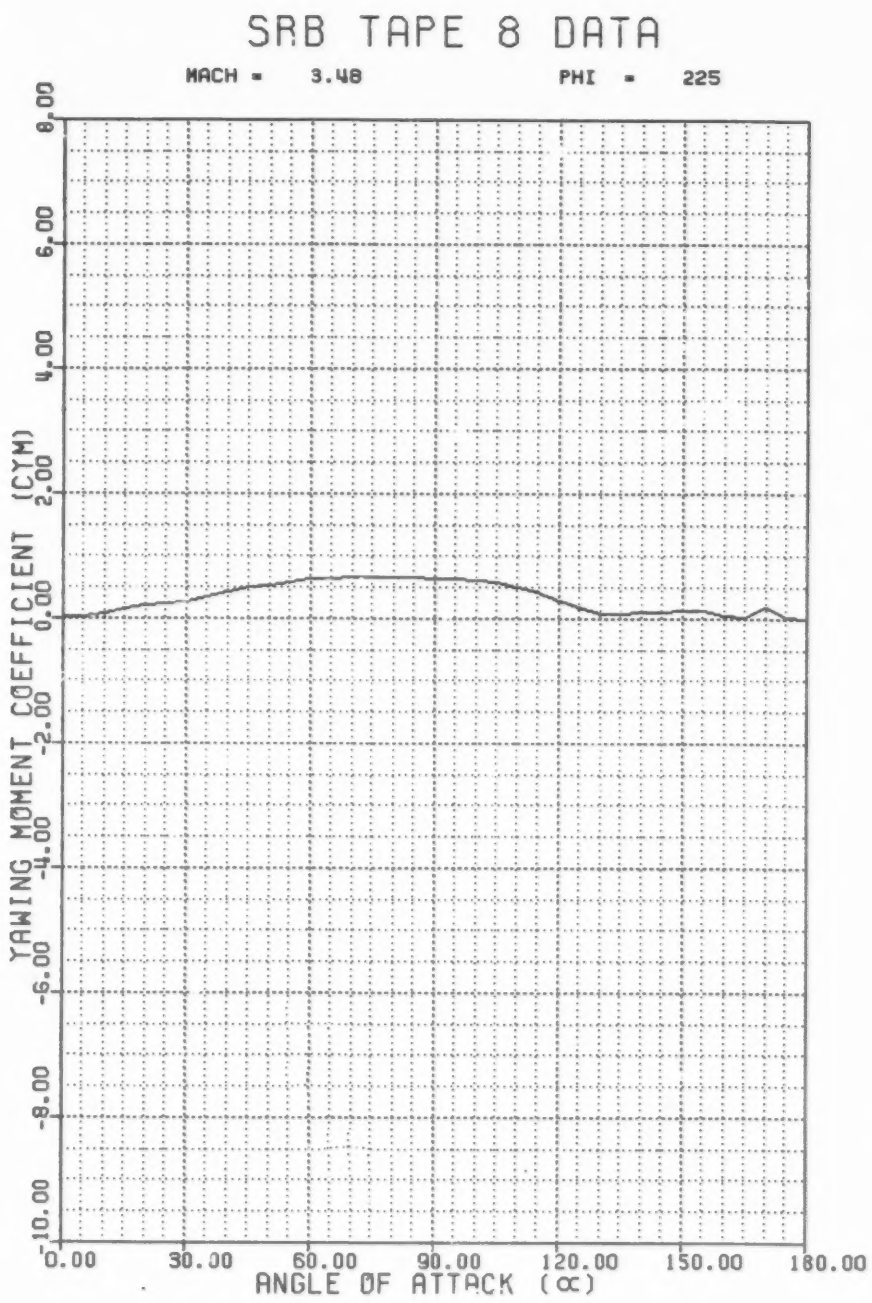
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 225
YAWING MOMENT COEFFICIENT (CYM)
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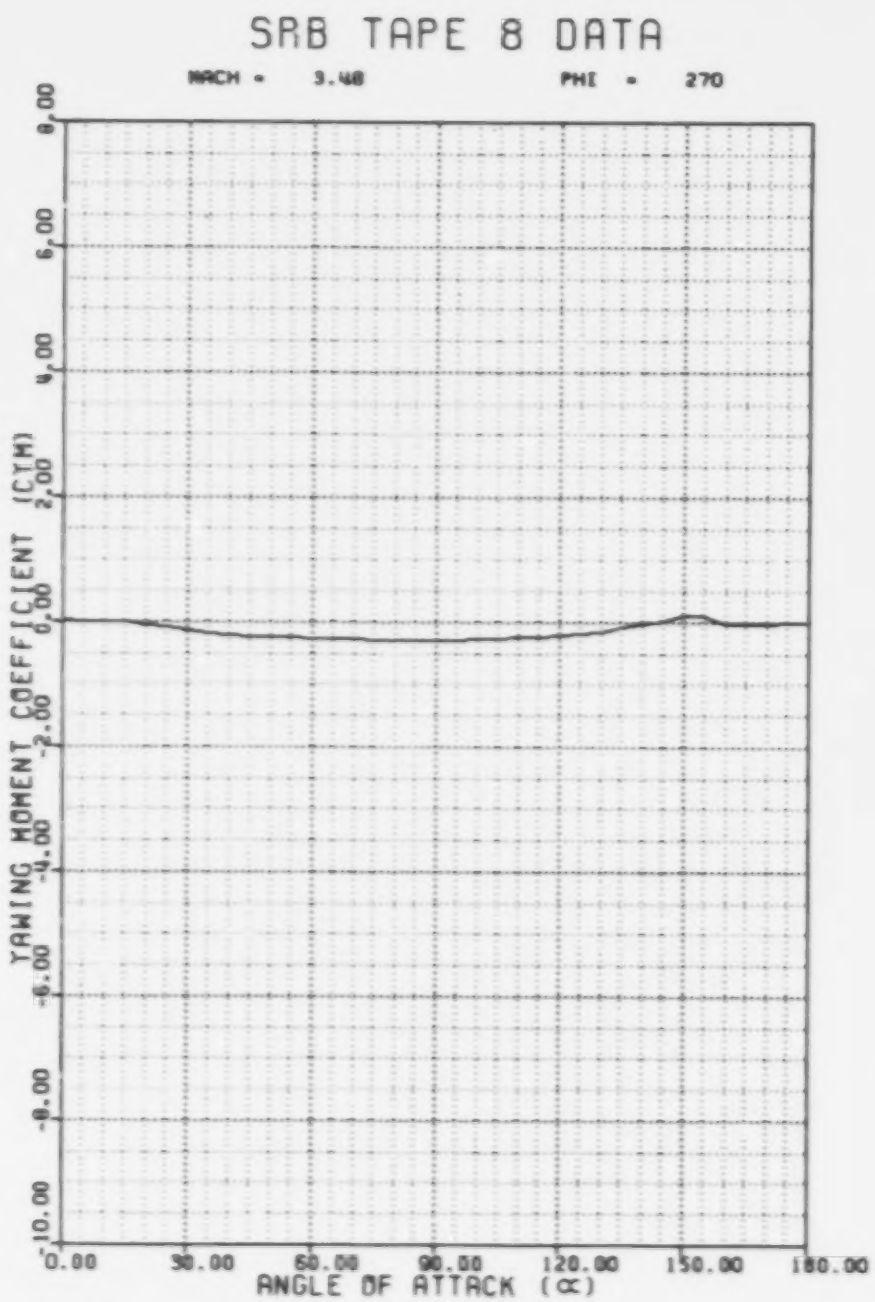
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)



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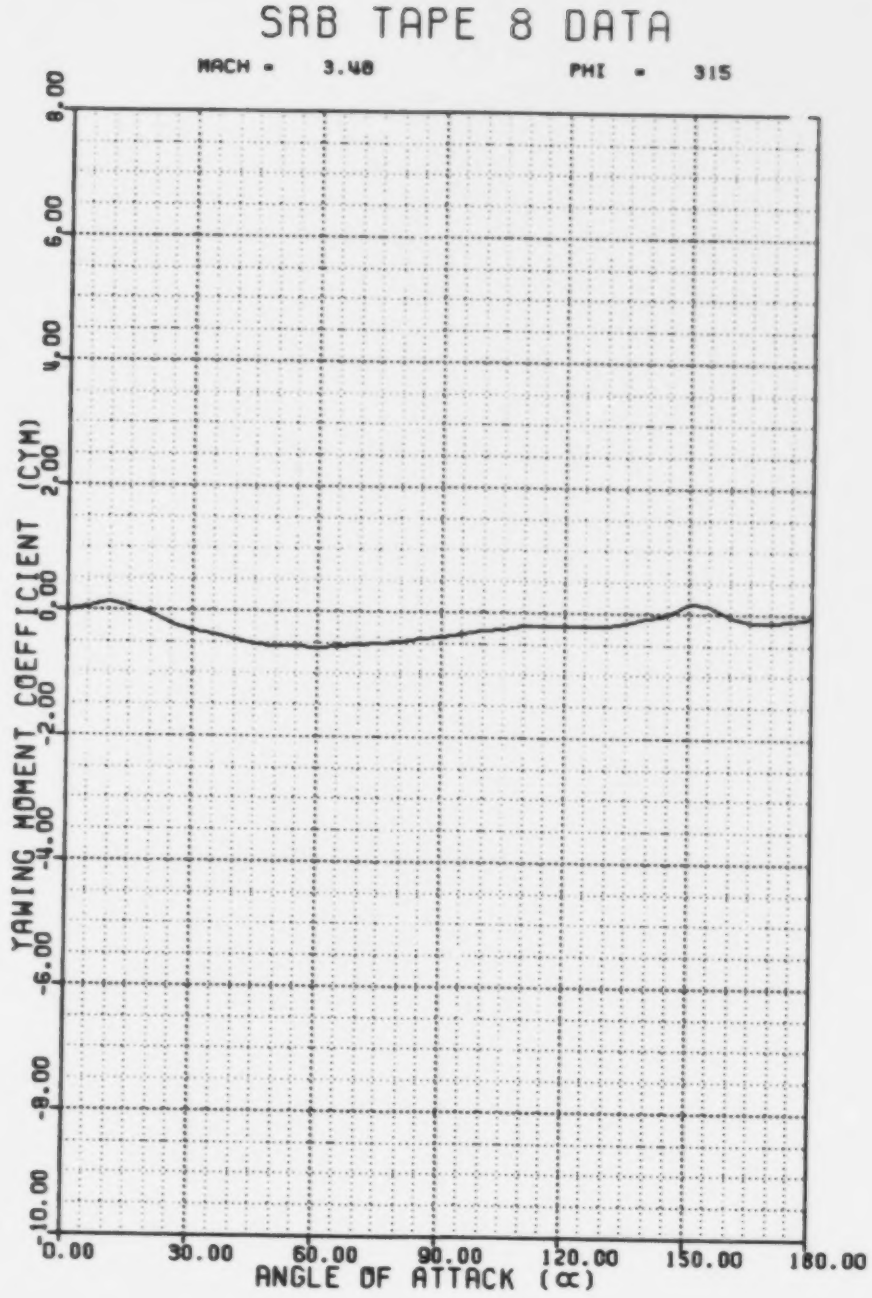
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

C-7


SRB TAPE 8 DATA
MACH = 3.48
PHI = 315
YAWING MOMENT COEFFICIENT (CYM)
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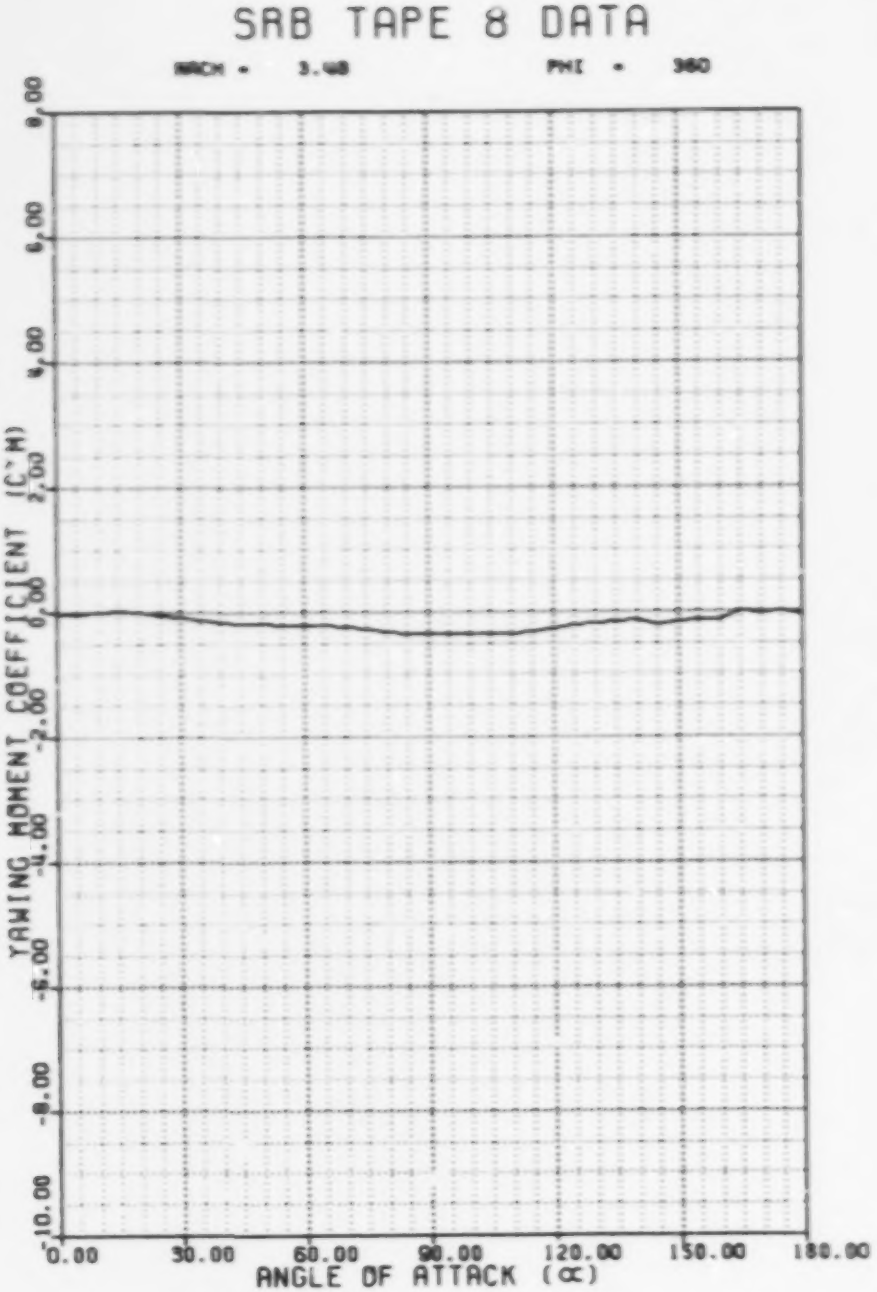
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 360
YAWING MOMENT COEFFICIENT (C'M)
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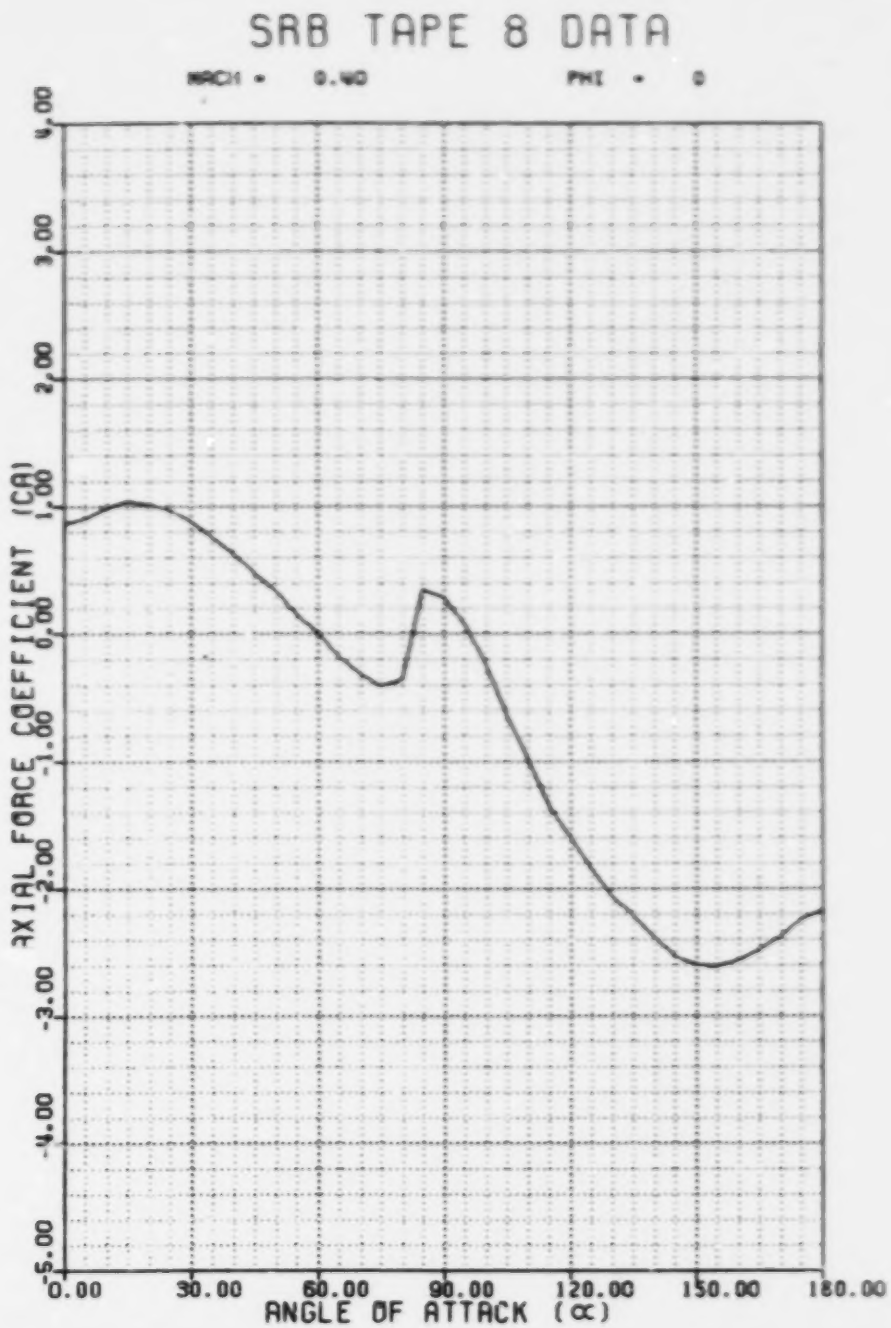
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

AXIAL FORCE (CA)

Mach Number	Page
0.4	B-577
0.5	B-586
0.55	B-595
0.6	B-604
0.7	B-613
0.8	B-622
0.9	B-631
0.95	B-640
1.05	B-649
1.1	B-658
1.2	B-667
1.4	B-676
1.96	B-685
2.5	B-694
3.0	B-703
3.48	B-712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AXIAL FORCE COEFFICIENT (CA)
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2.00
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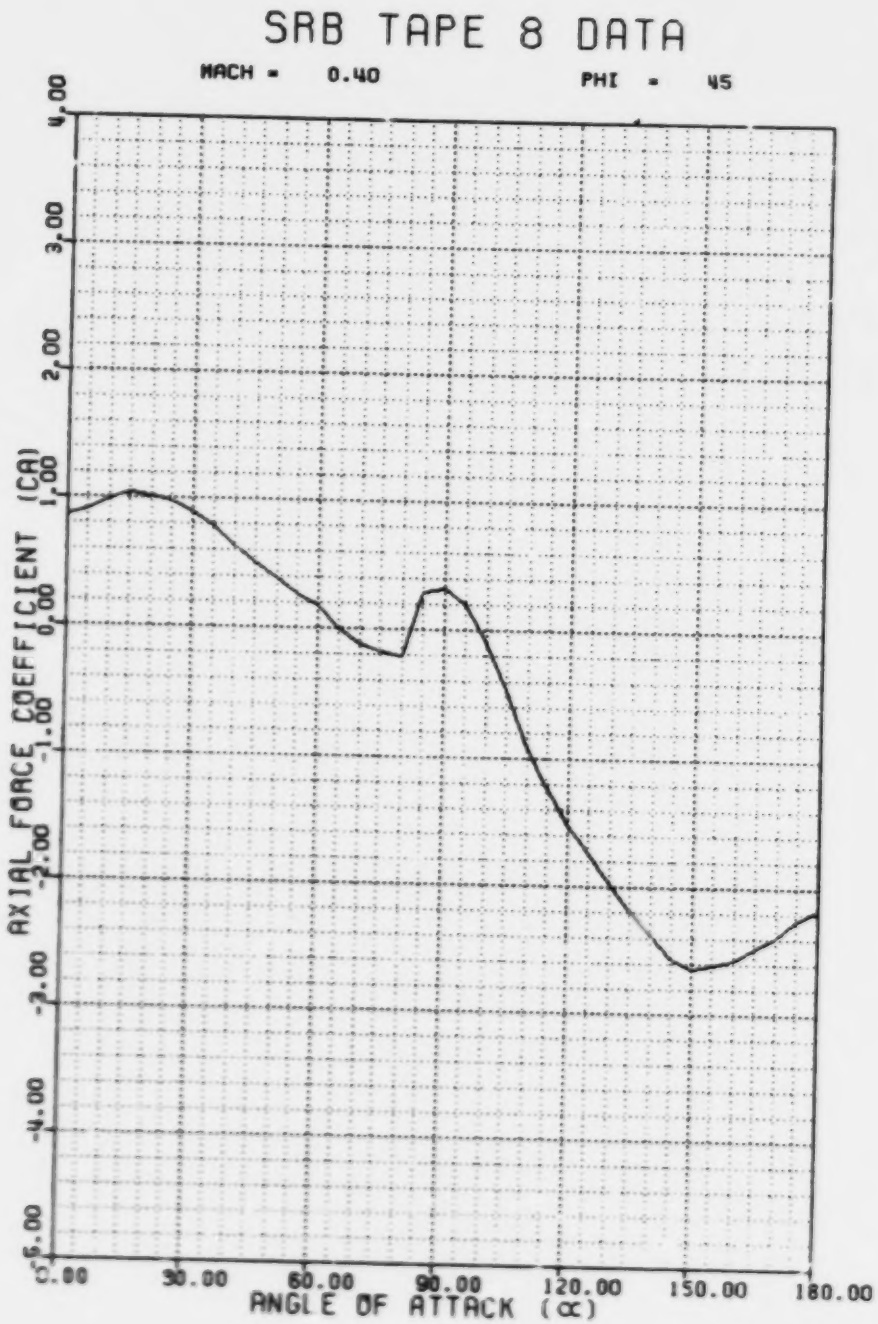
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
-1.00
-2.00
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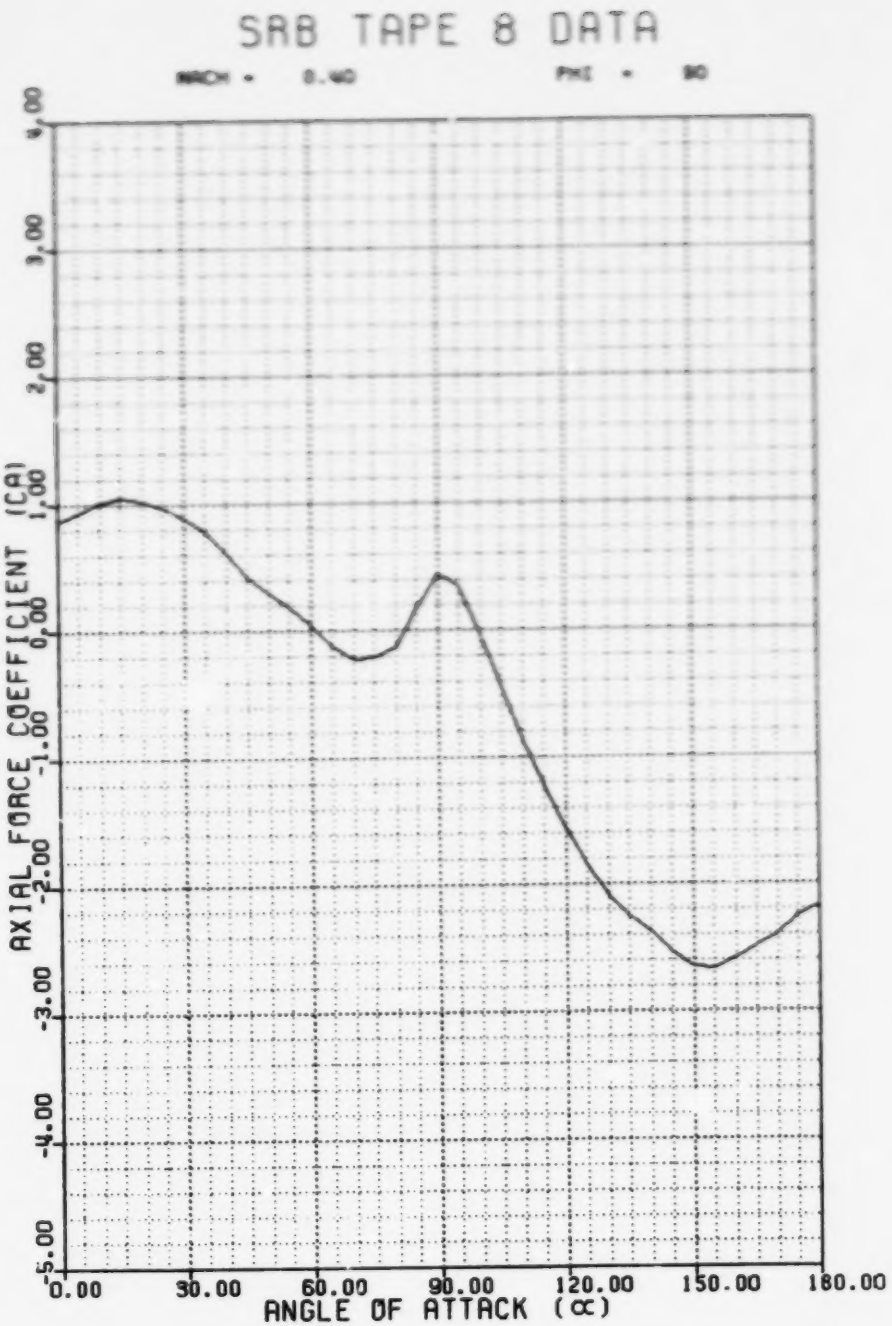
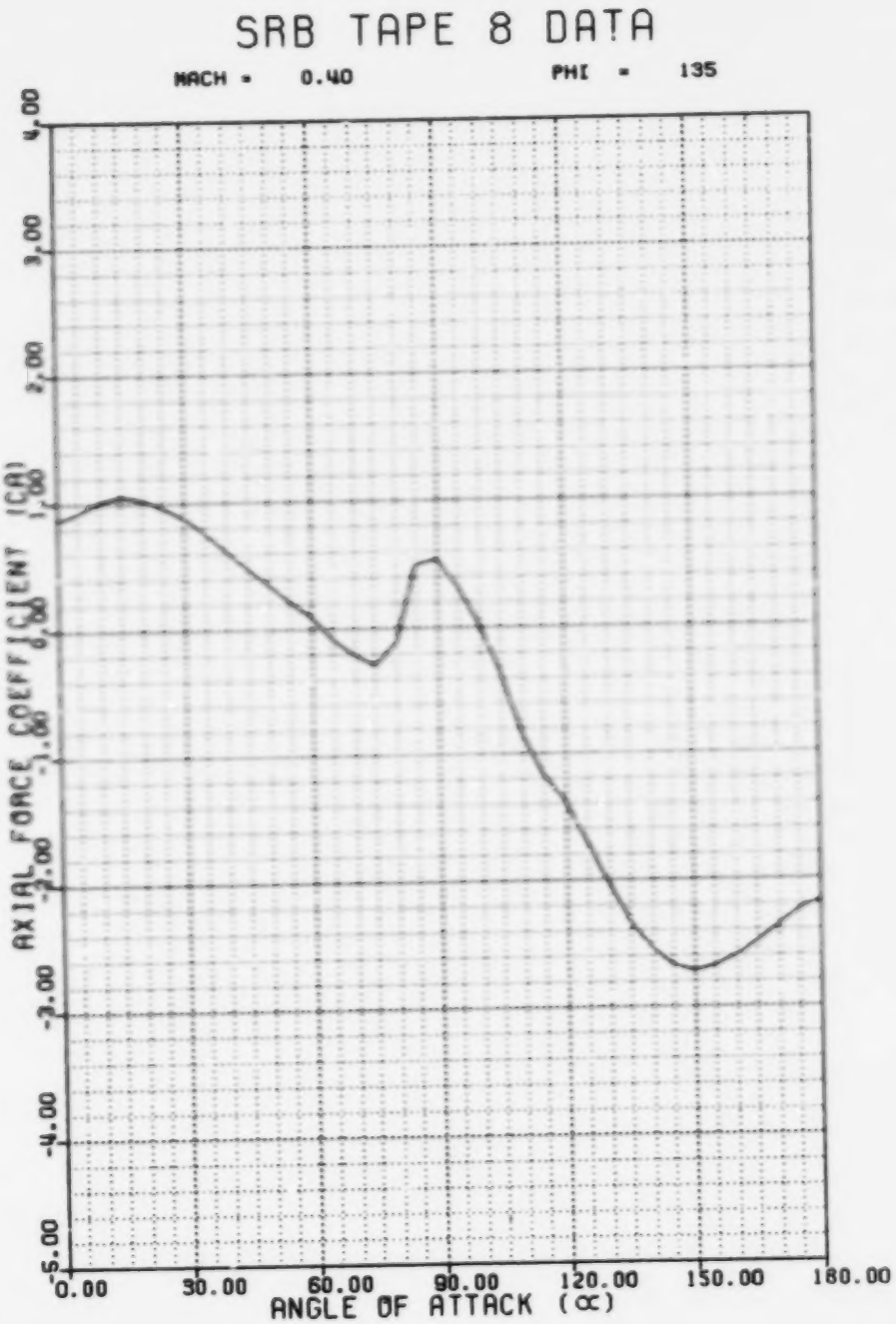
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
AXIAL FORCE COEFFICIENT (CA)
ANGLE OF ATTACK (α)
0.00
30.00
60.00
90.00
120.00
150.00
180.00
-5.00
-4.00
-3.00
-2.00
-1.00
0.00
1.00
2.00
3.00


SRB TAPE 8 DATA
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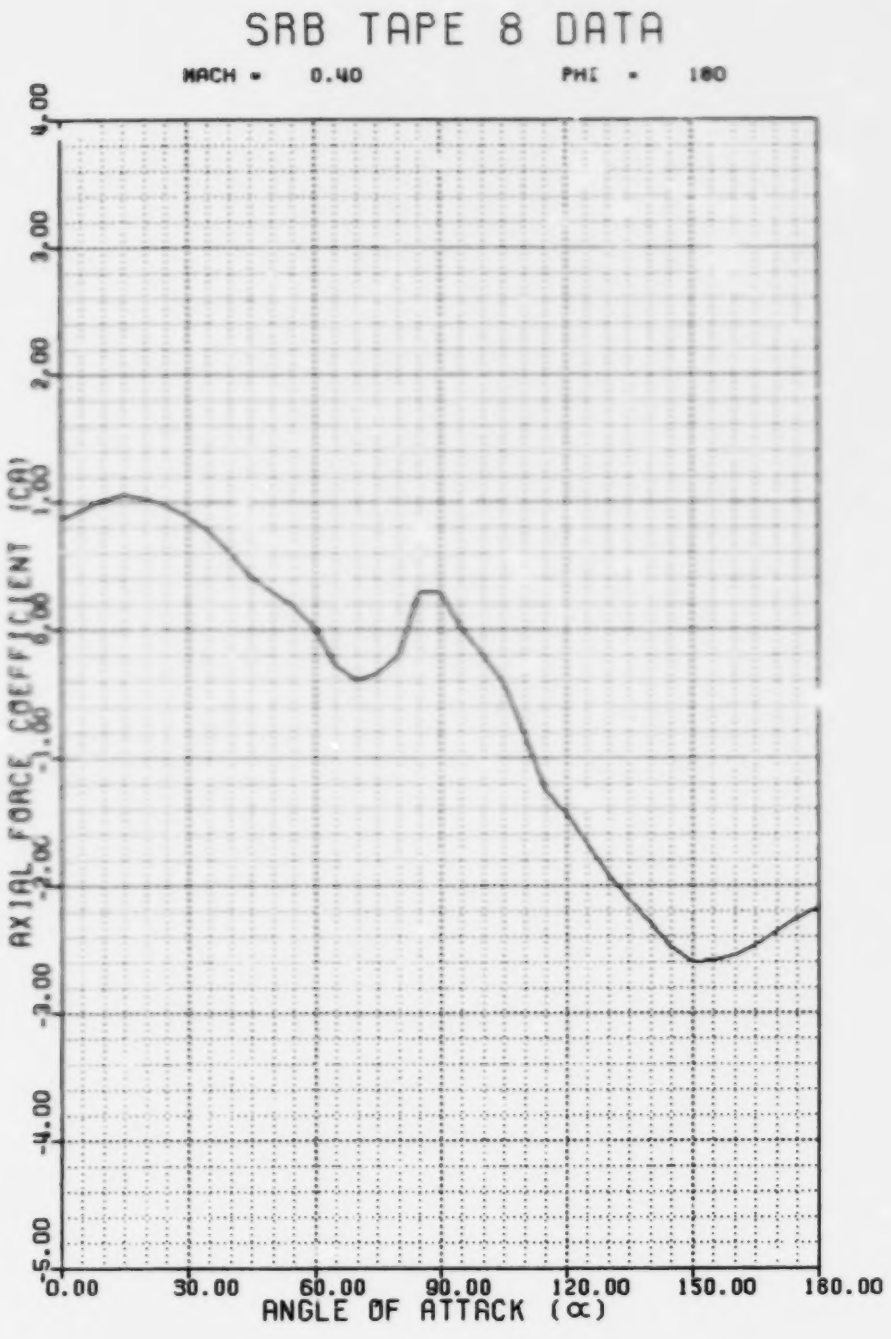
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
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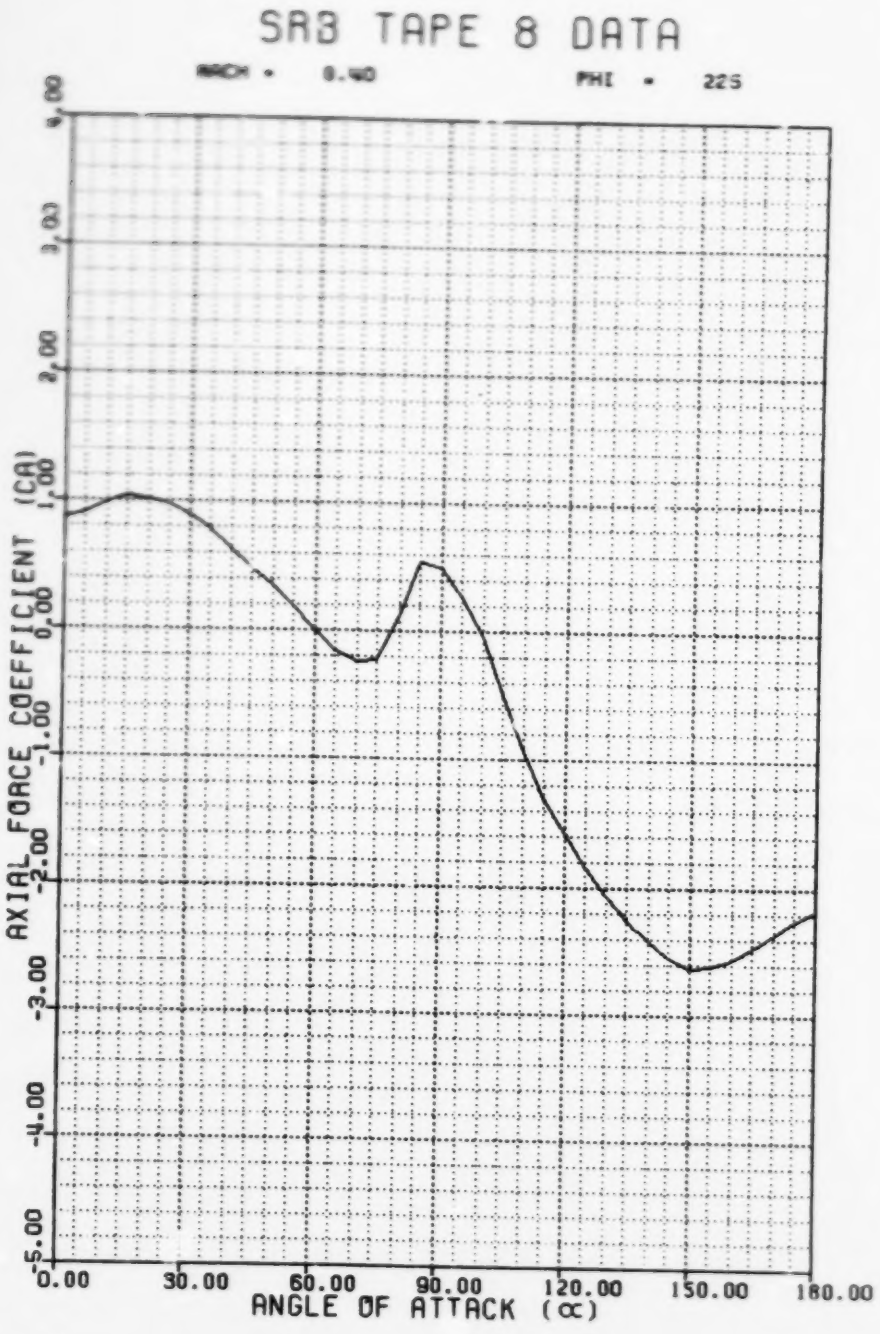
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH • 0.40
PHI • 225
AXIAL FORCE COEFFICIENT (CA)
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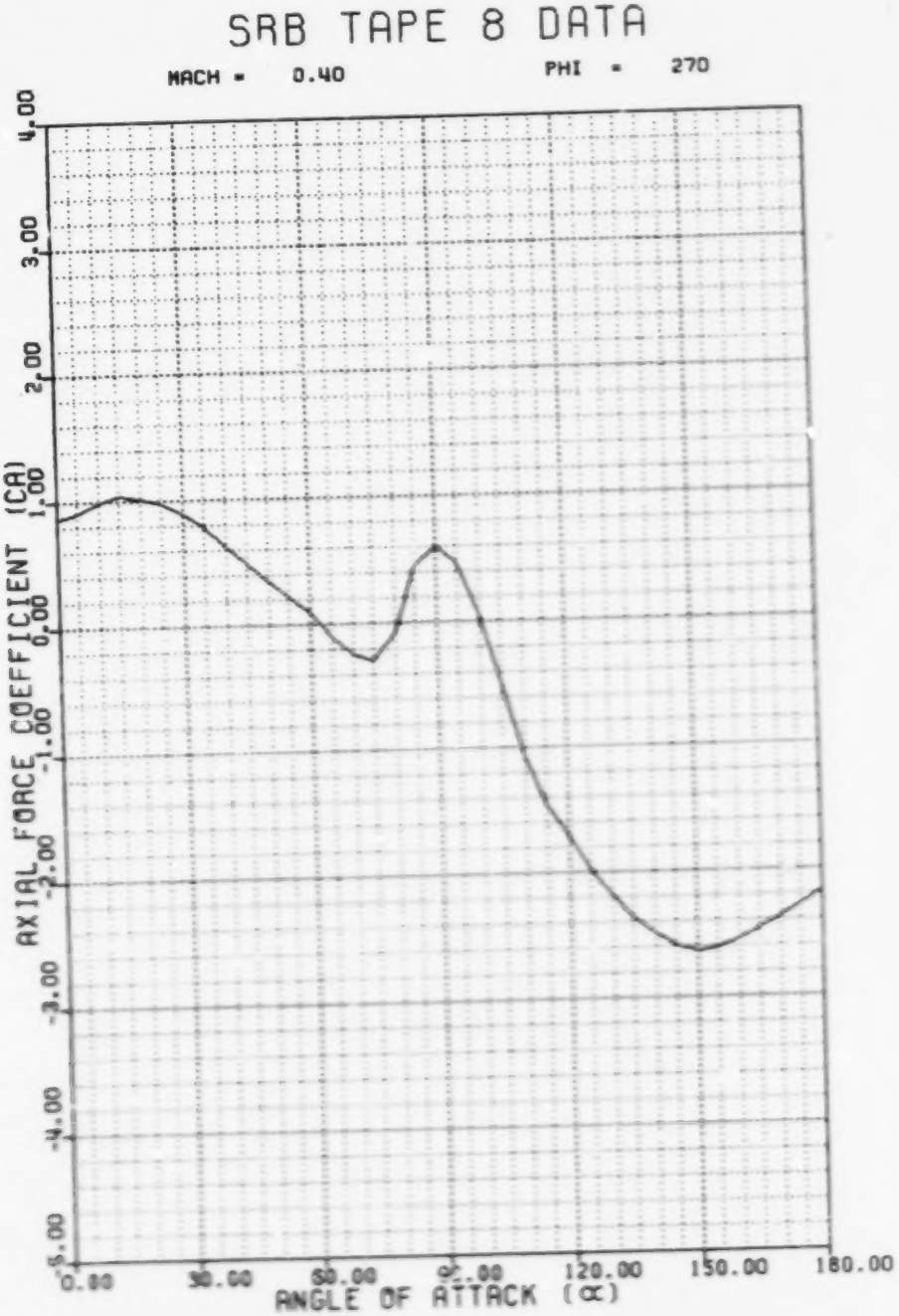
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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2.00
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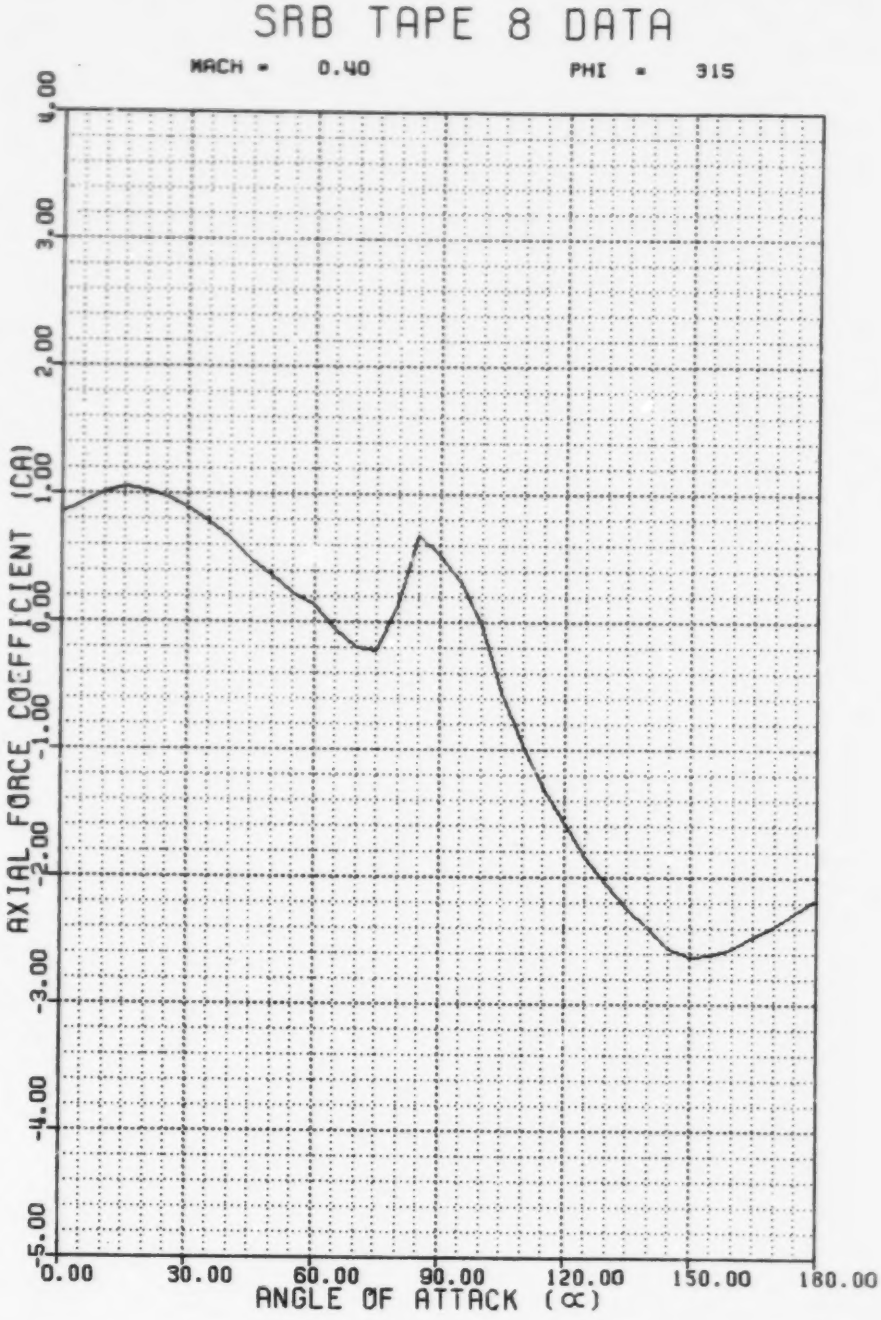
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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2.00
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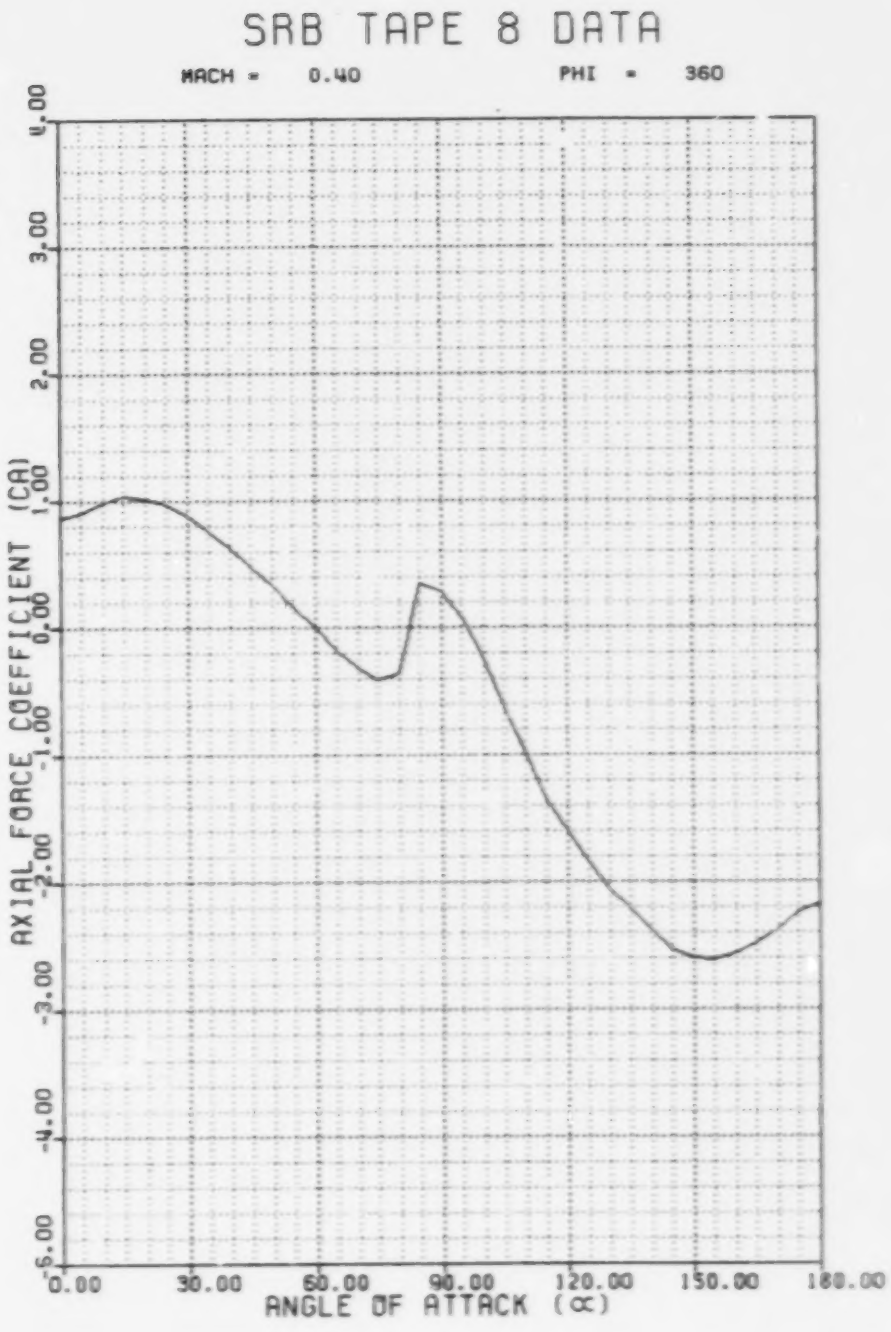
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.40
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
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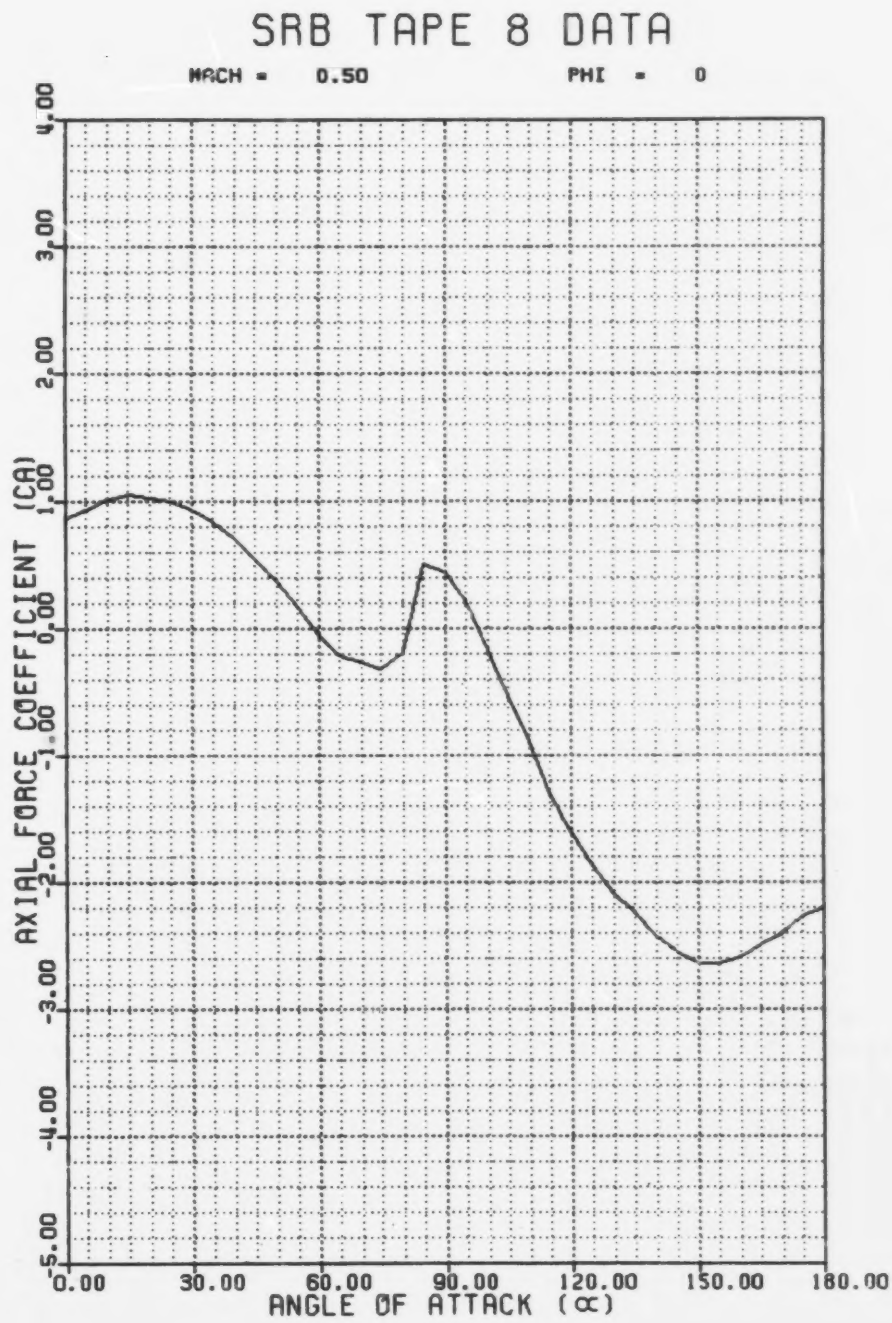
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-6.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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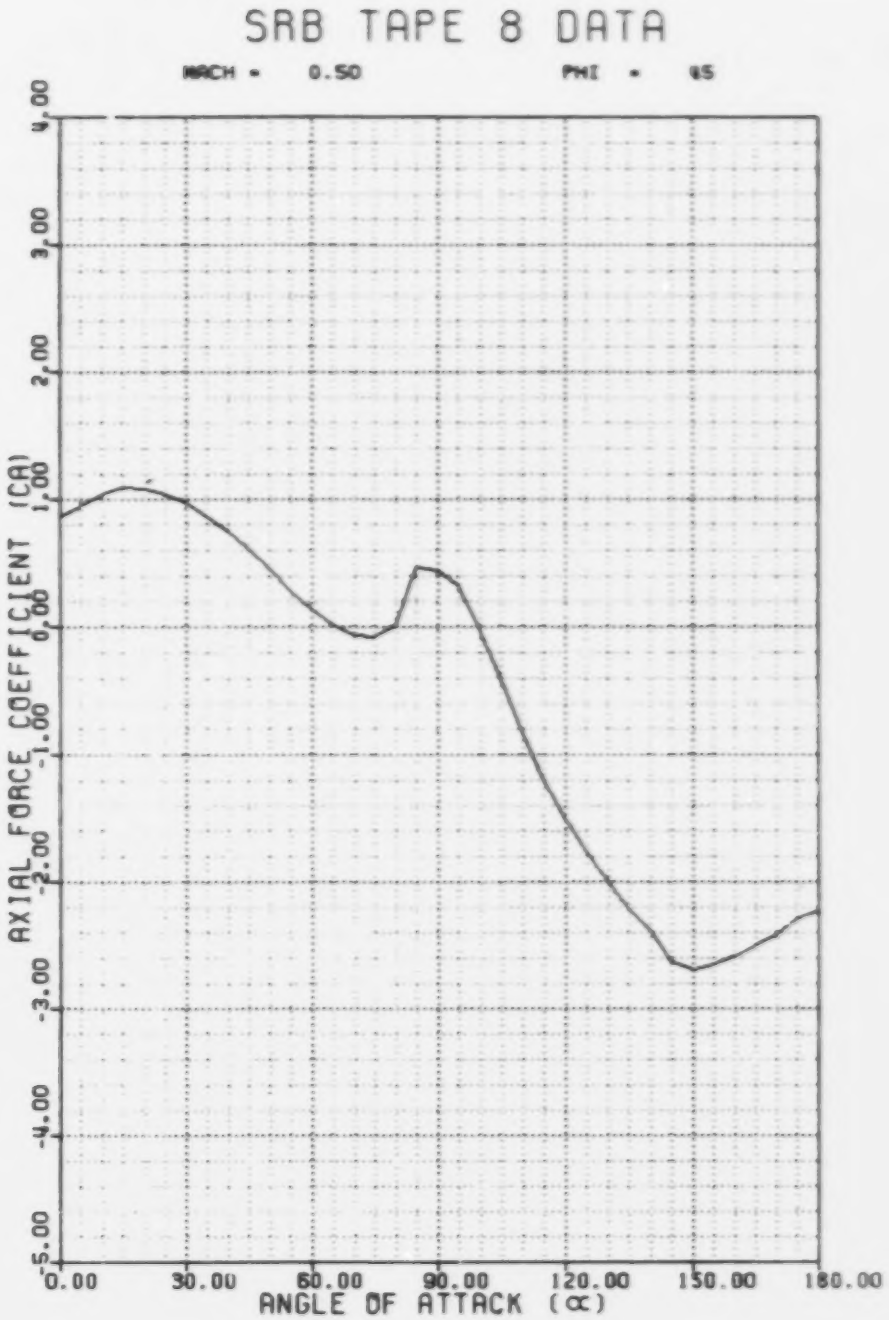
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 85
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1.00
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-4.00
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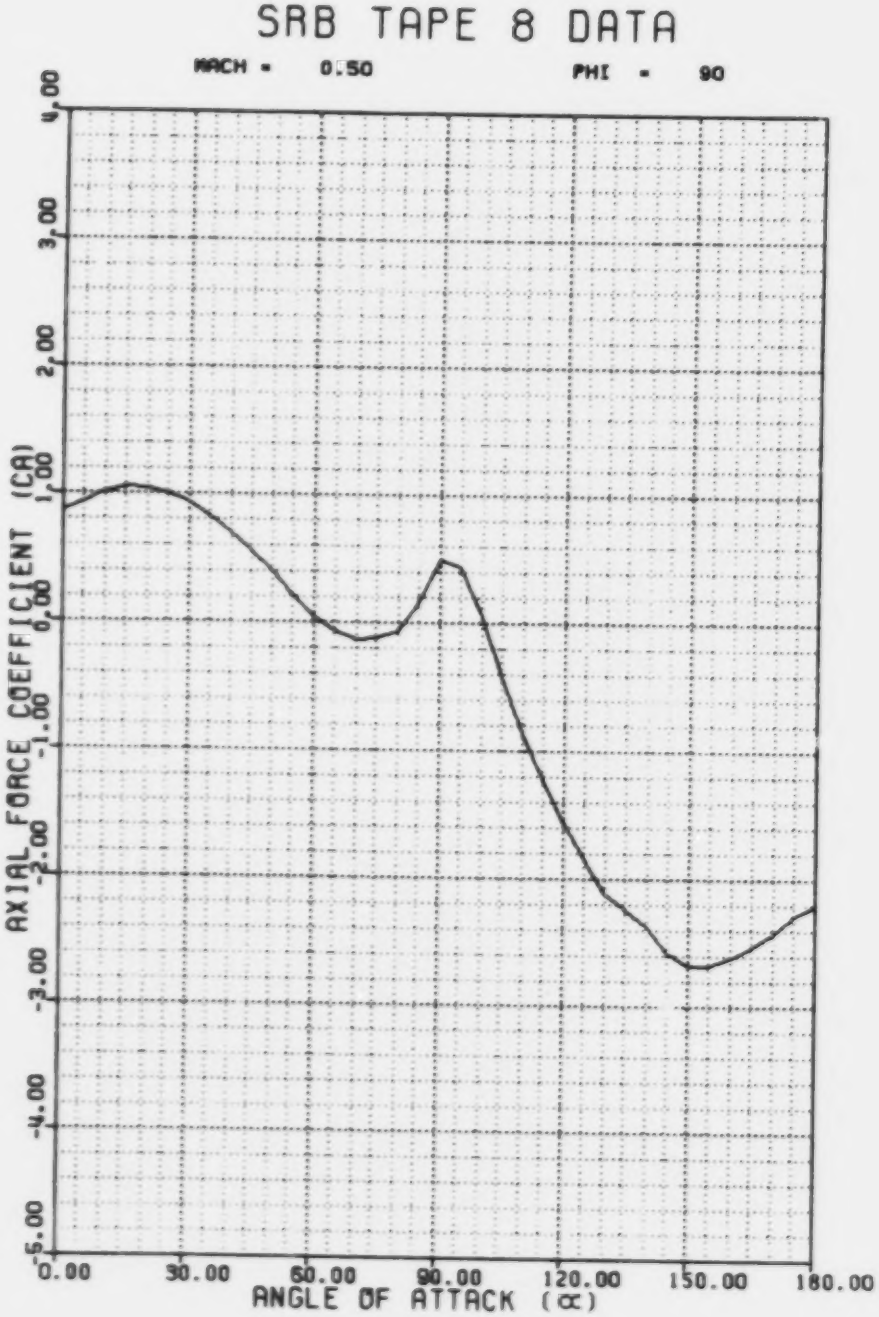
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
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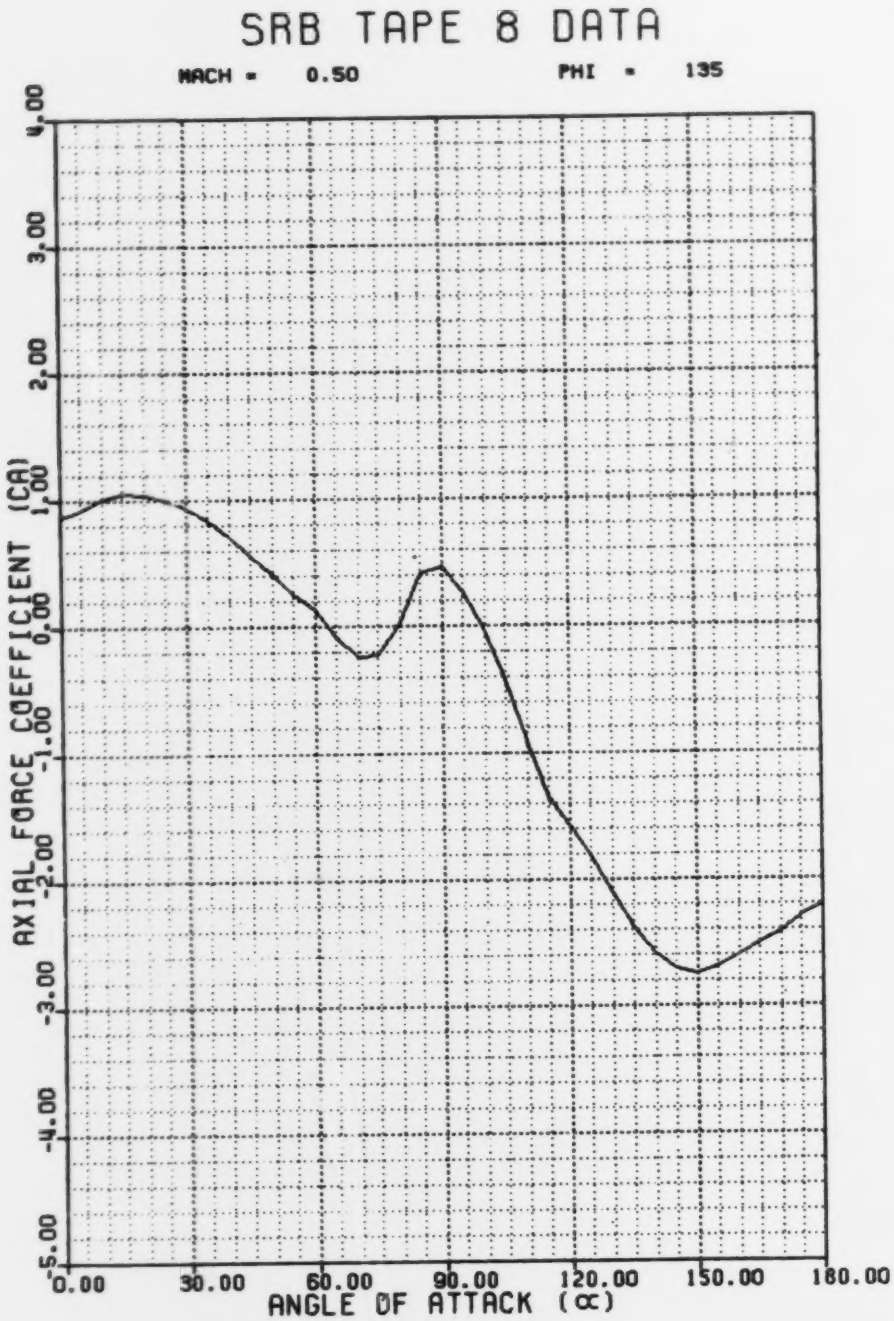
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
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3.00
2.00
1.00
0.00
-1.00
-2.00
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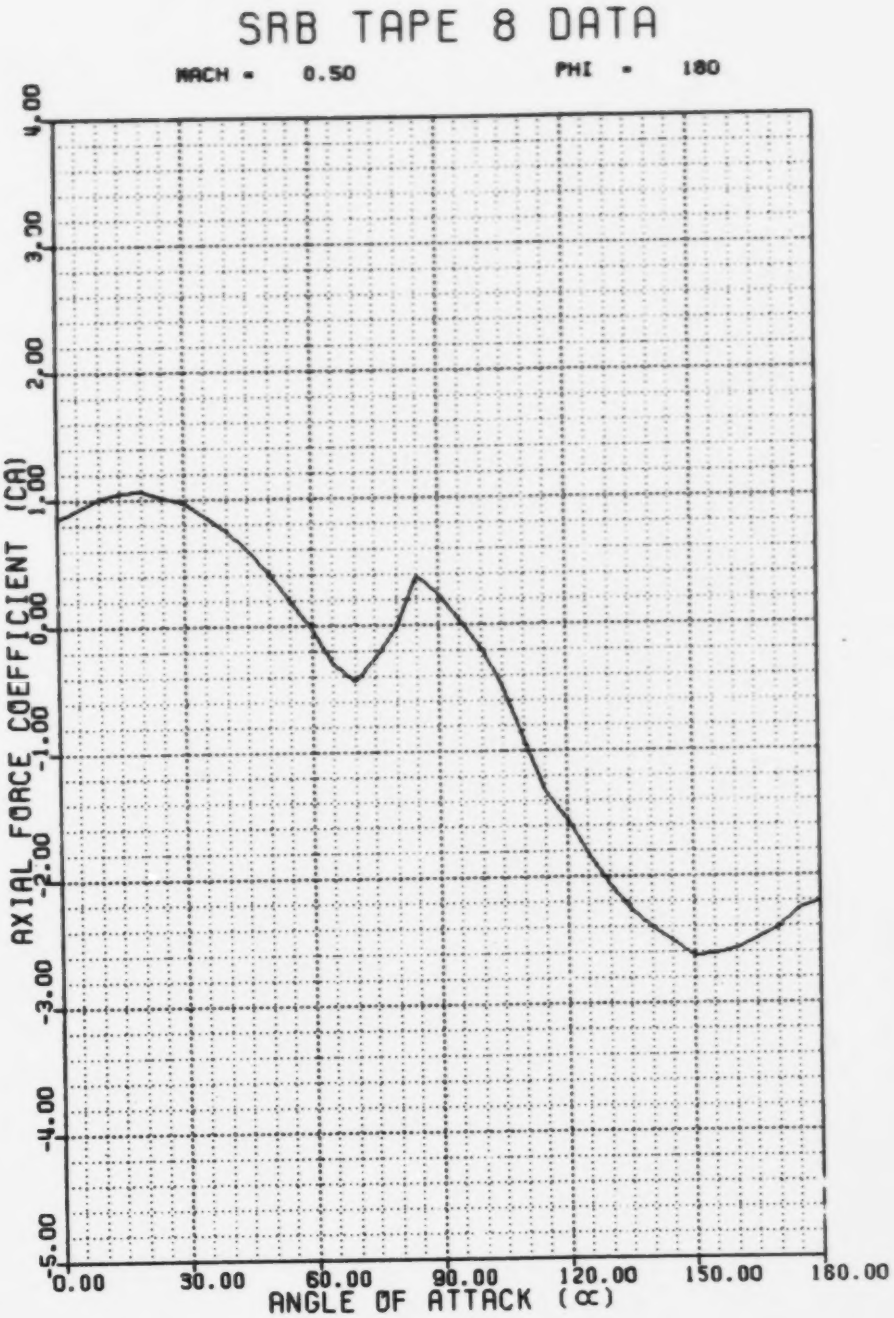
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
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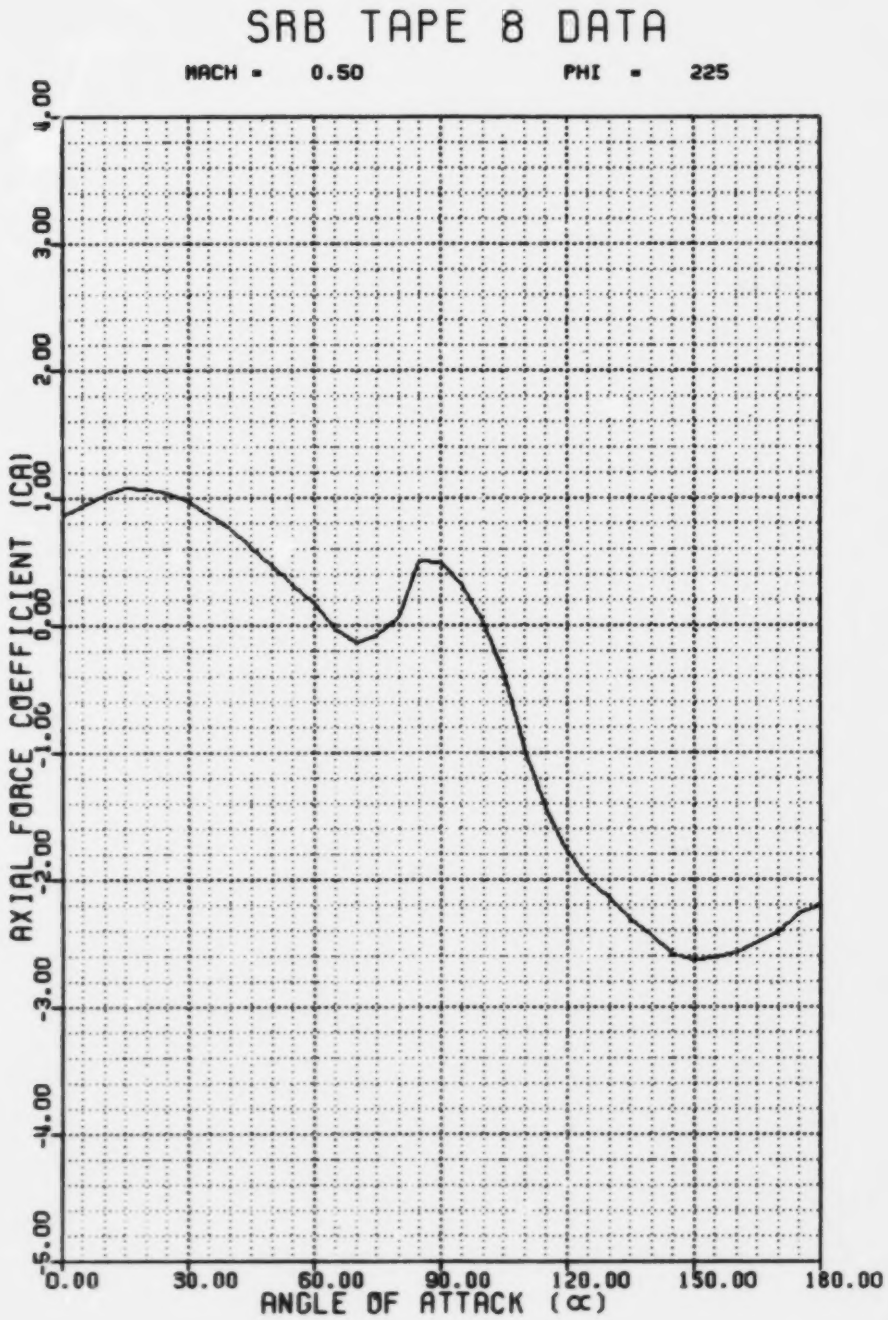
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
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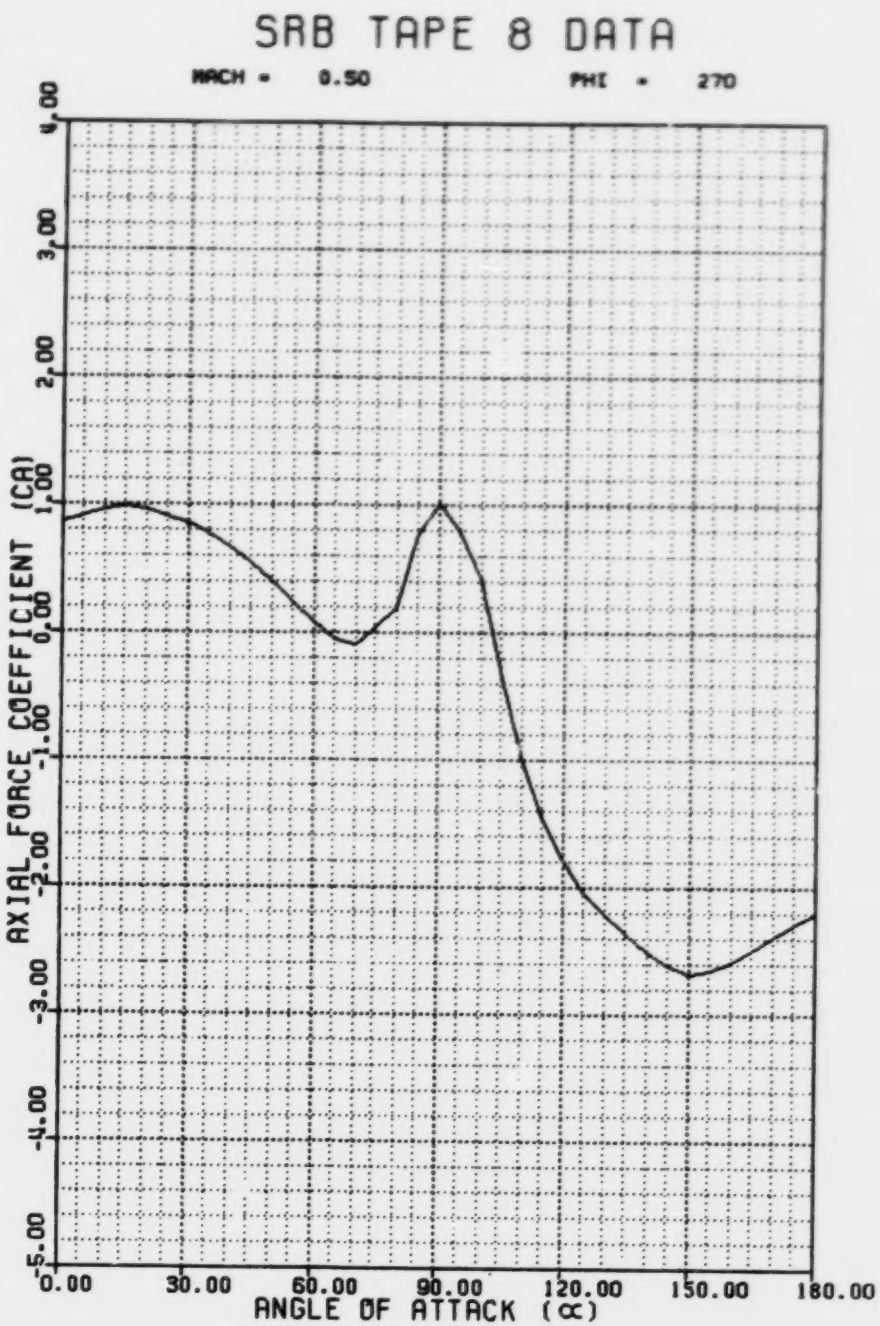
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
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2.00
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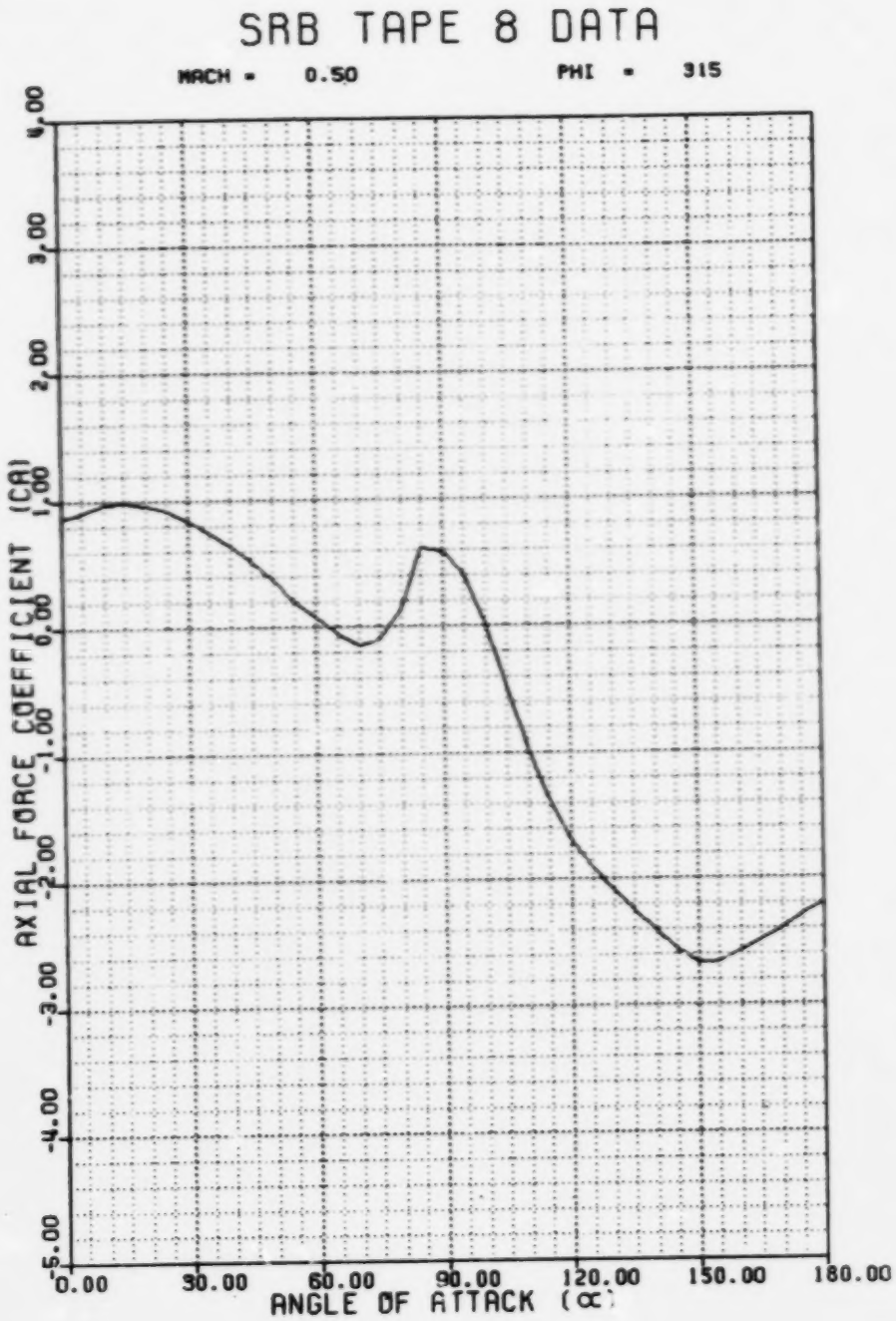
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
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0.00
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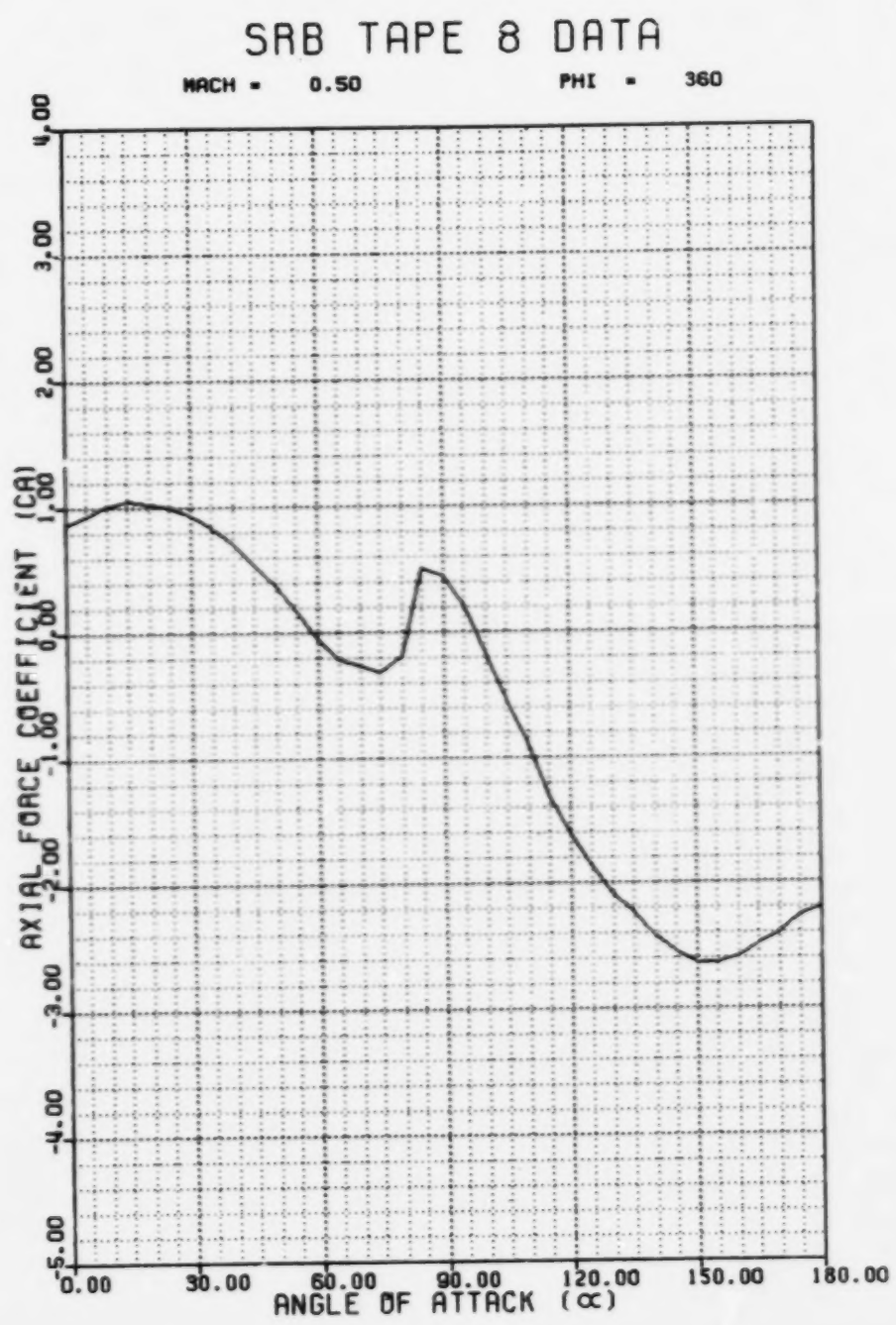
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.50
PHI = 360
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2.00
1.00
0.00
-1.00
-2.00
-3.00
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0.00
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60.00
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120.00
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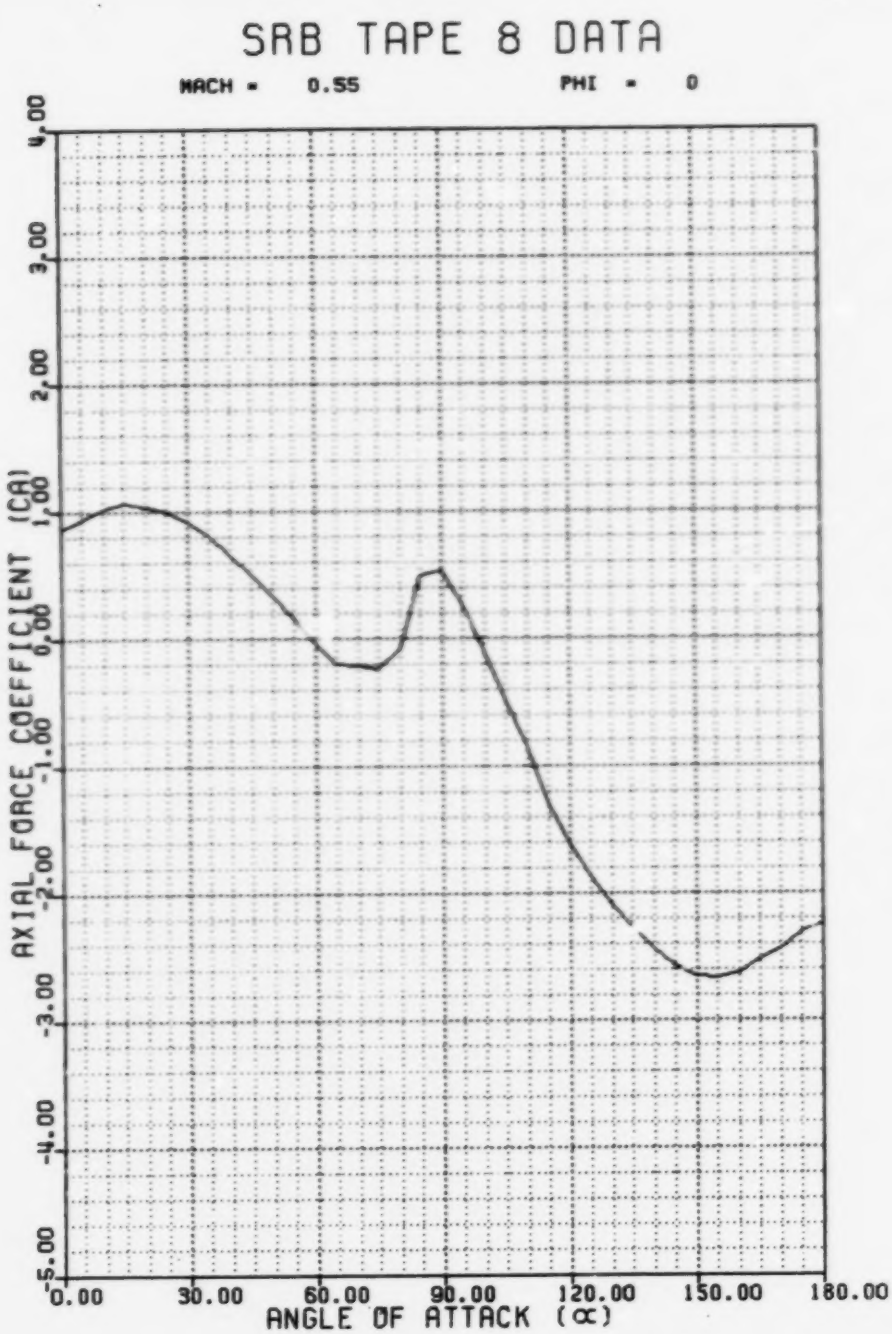
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
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-1.00
-2.00
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0.00
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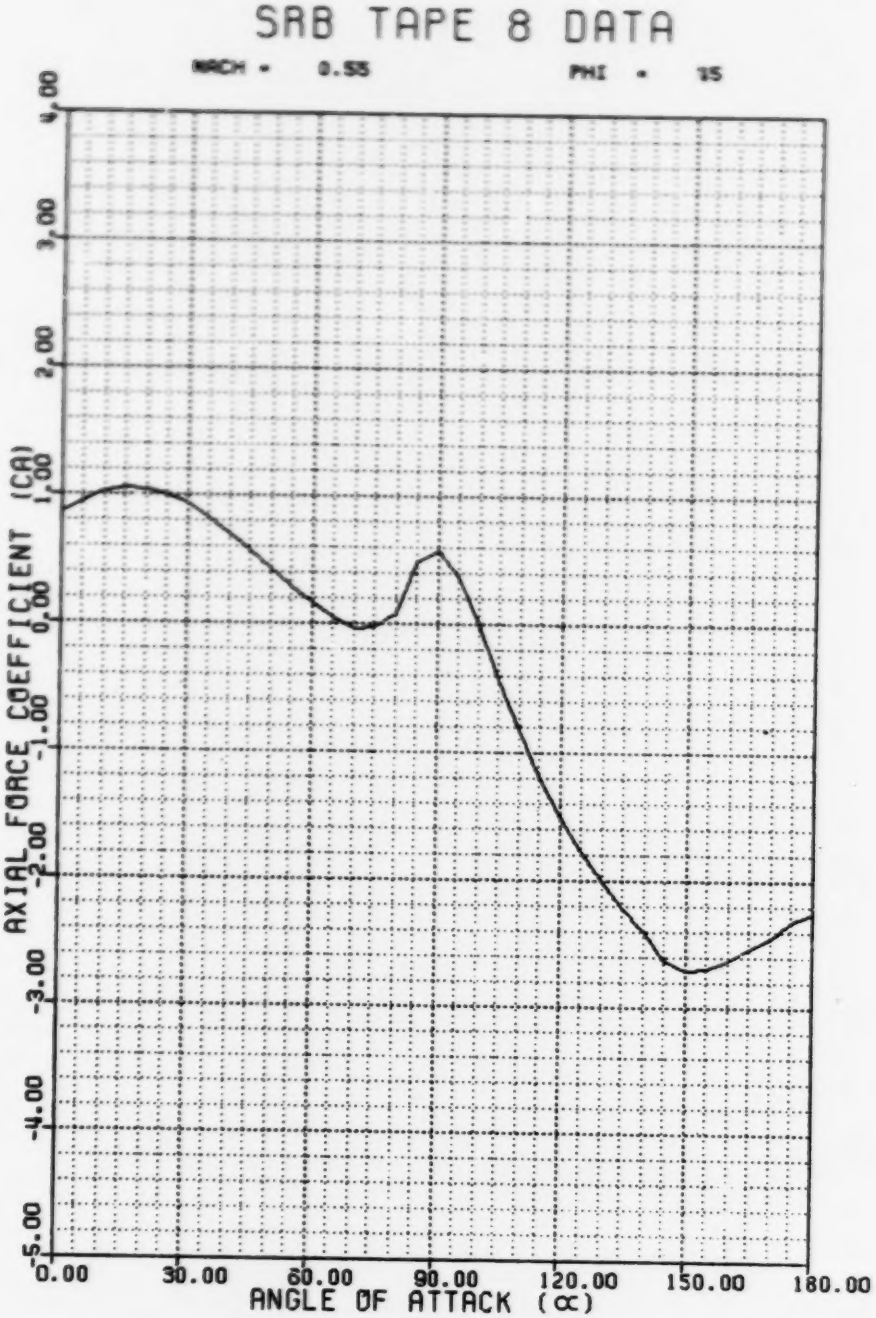
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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0.00
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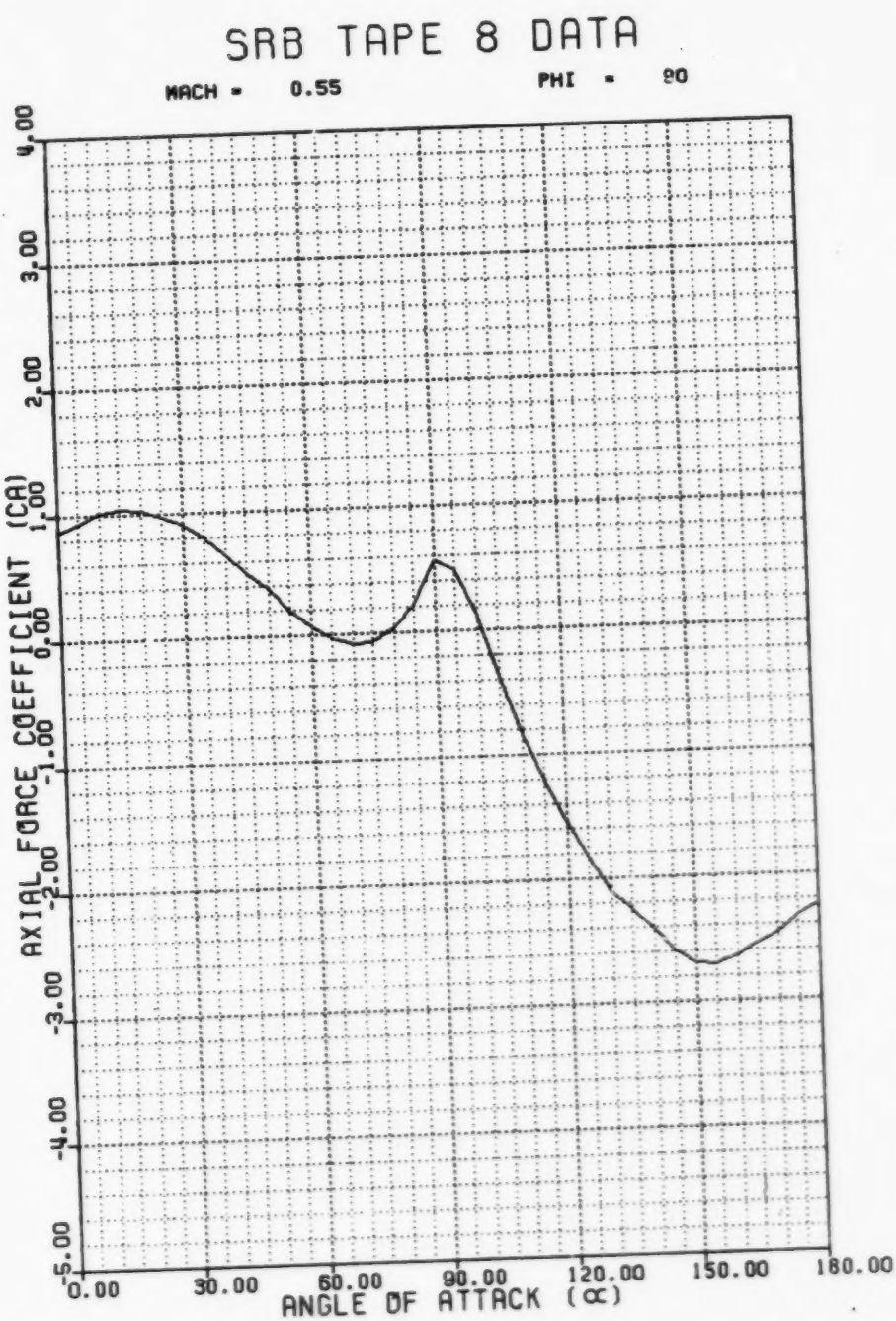
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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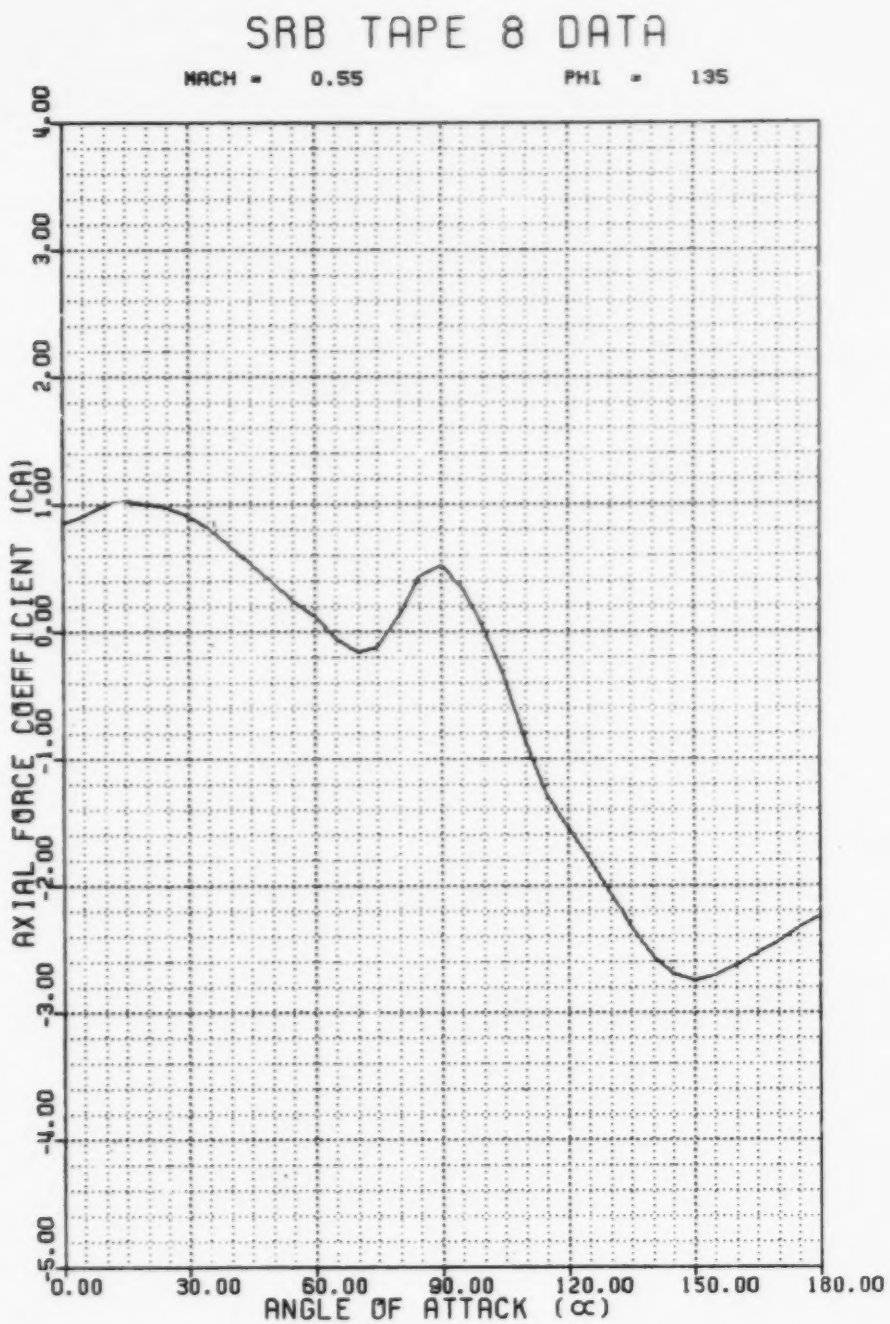
ANGLE OF ATTACK (α)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MACH = 0.55
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2.00
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-1.00
-2.00
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0.00
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60.00
90.00
120.00
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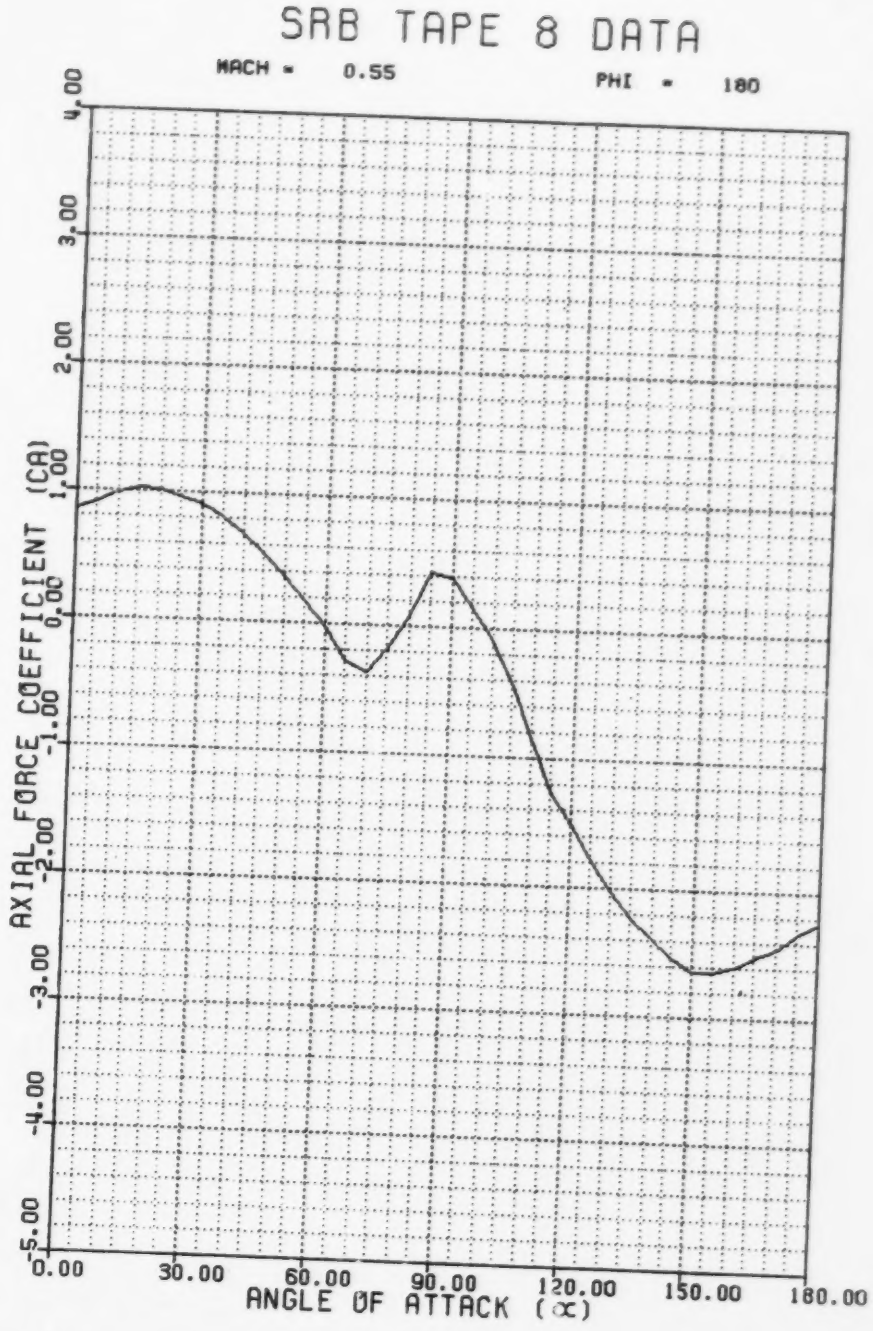
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
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2.00
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-1.00
-2.00
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0.00
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60.00
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120.00
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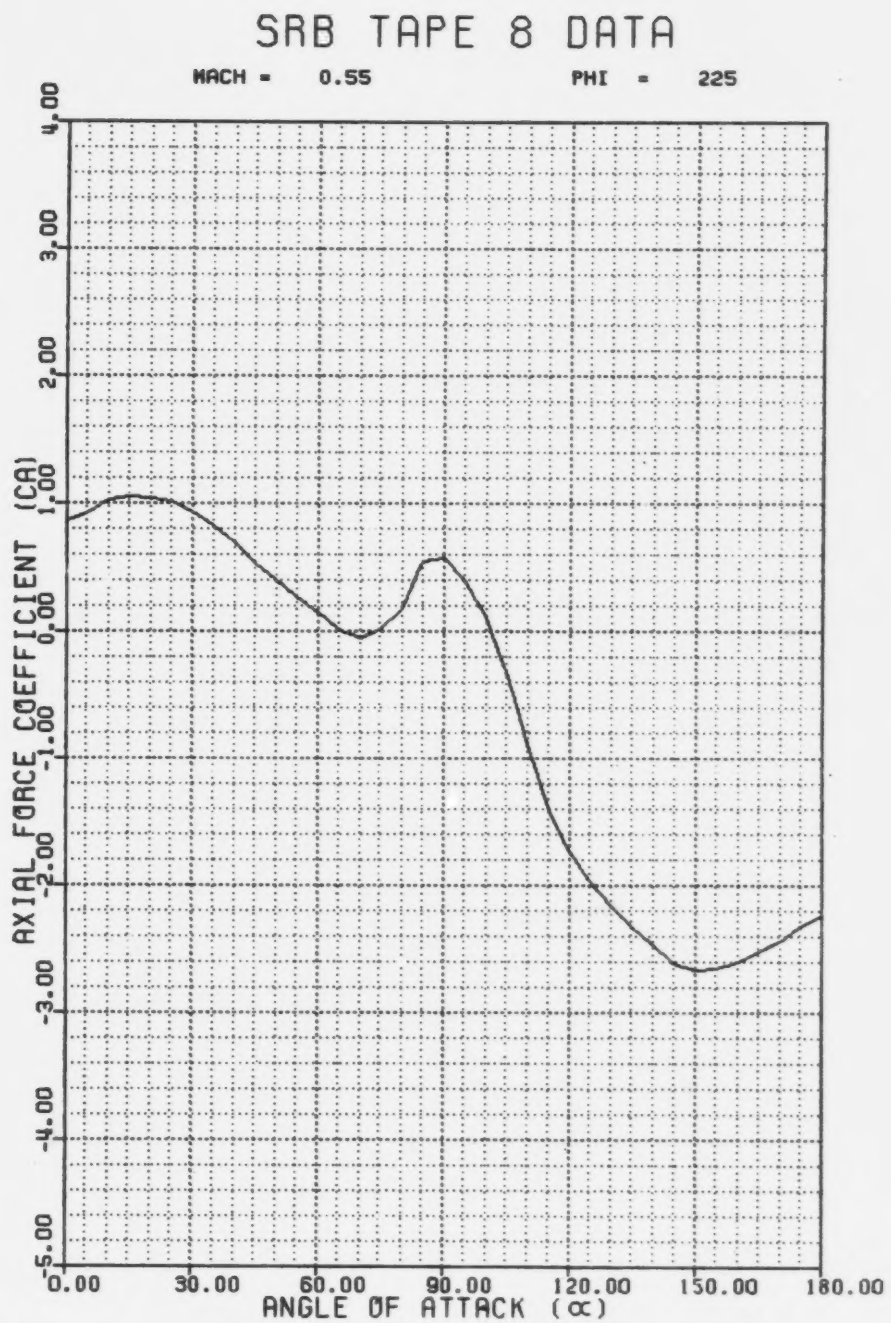
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 225
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2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
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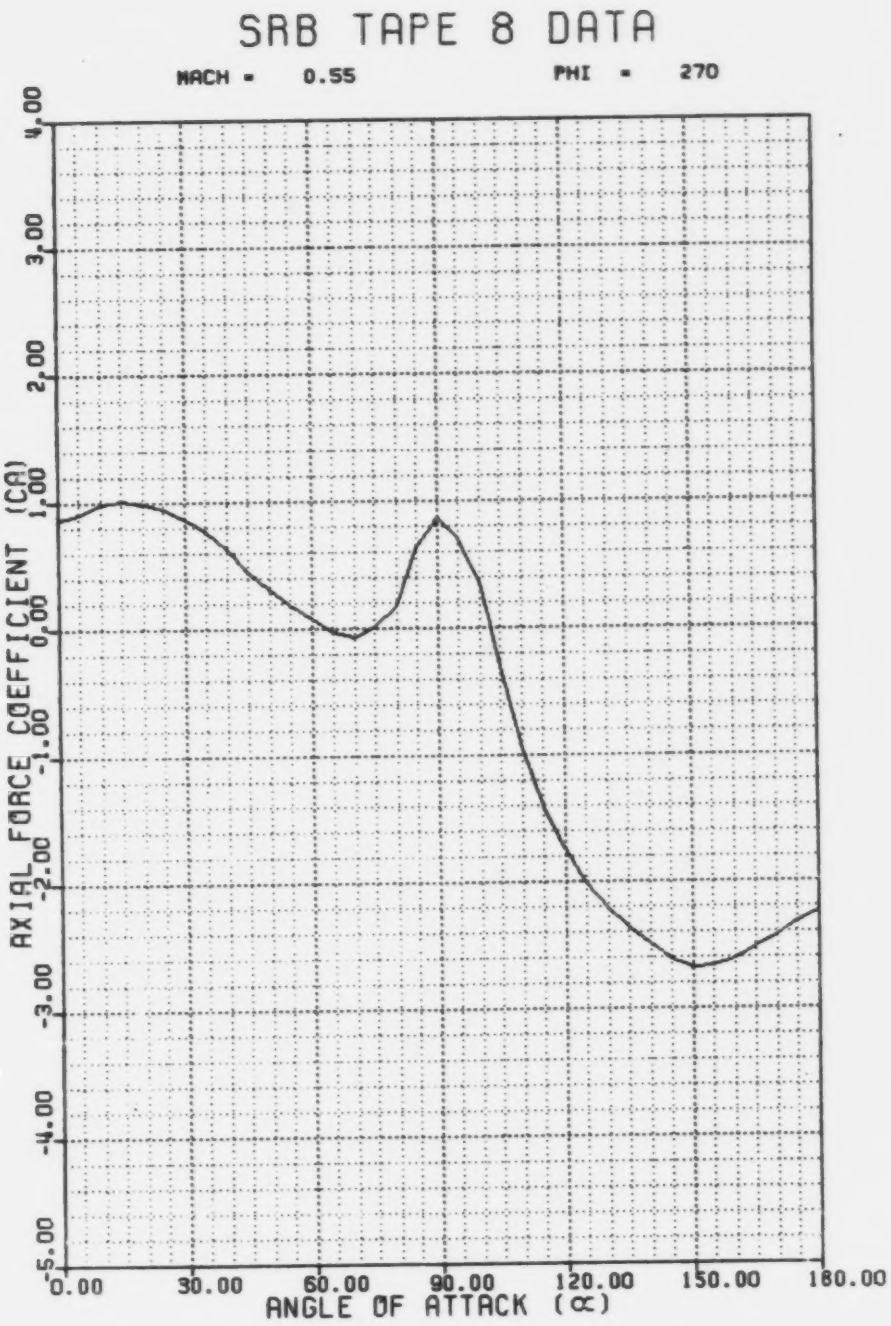
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
PHI = 270
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2.00
1.00
0.00
-1.00
-2.00
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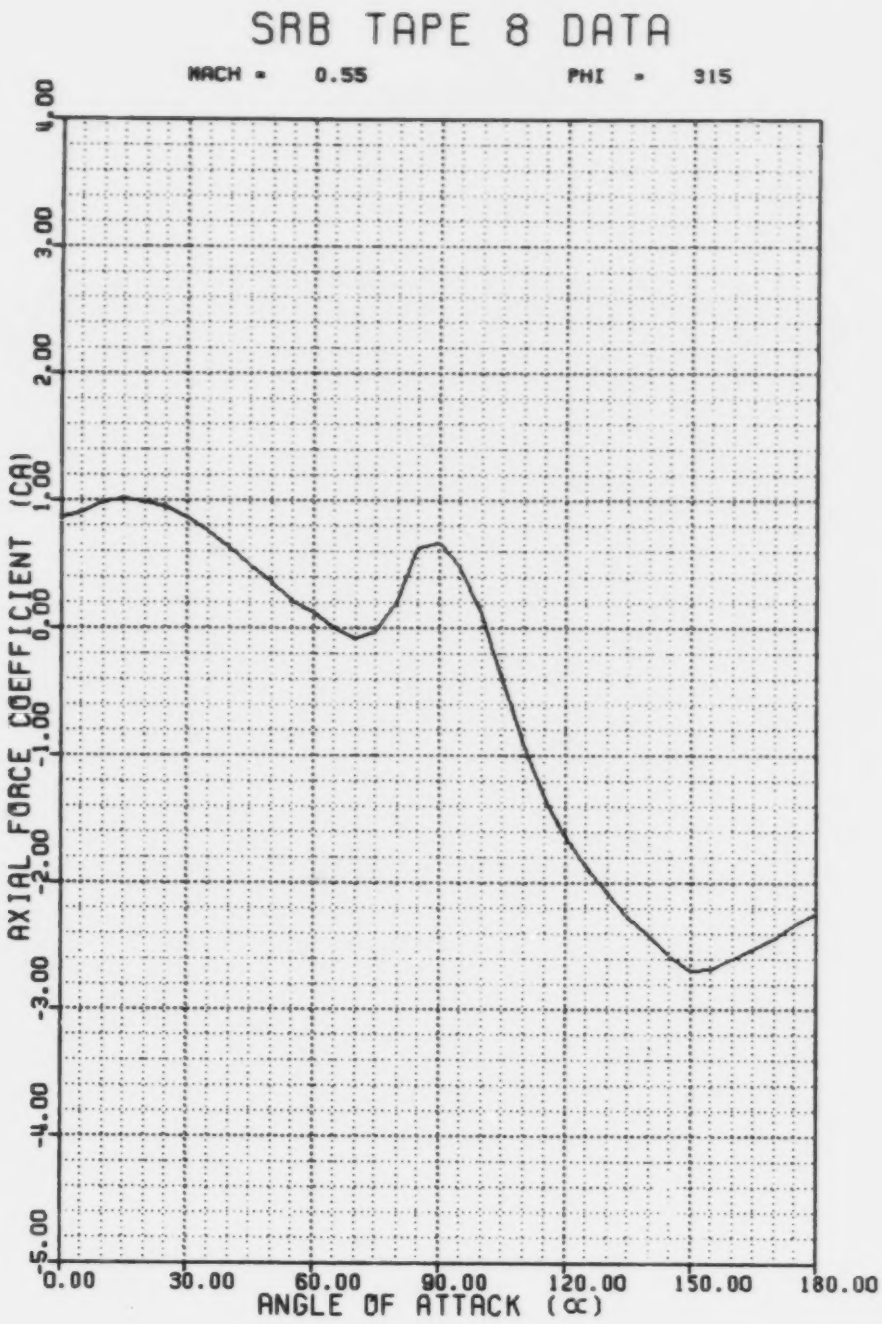
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
PHI = 315
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2.00
1.00
0.00
-1.00
-2.00
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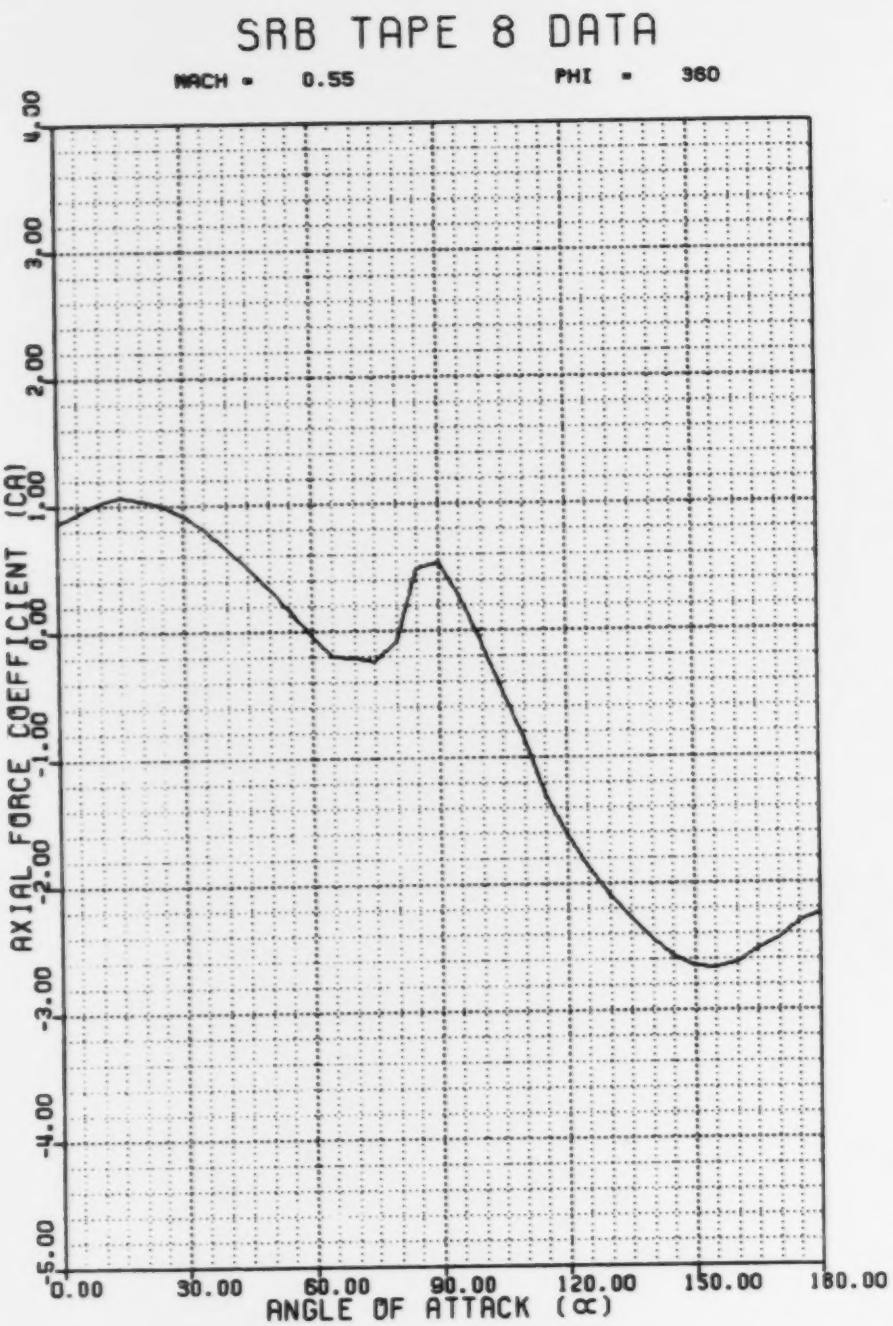
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
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2.00
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0.00
-1.00
-2.00
-3.00
-4.00
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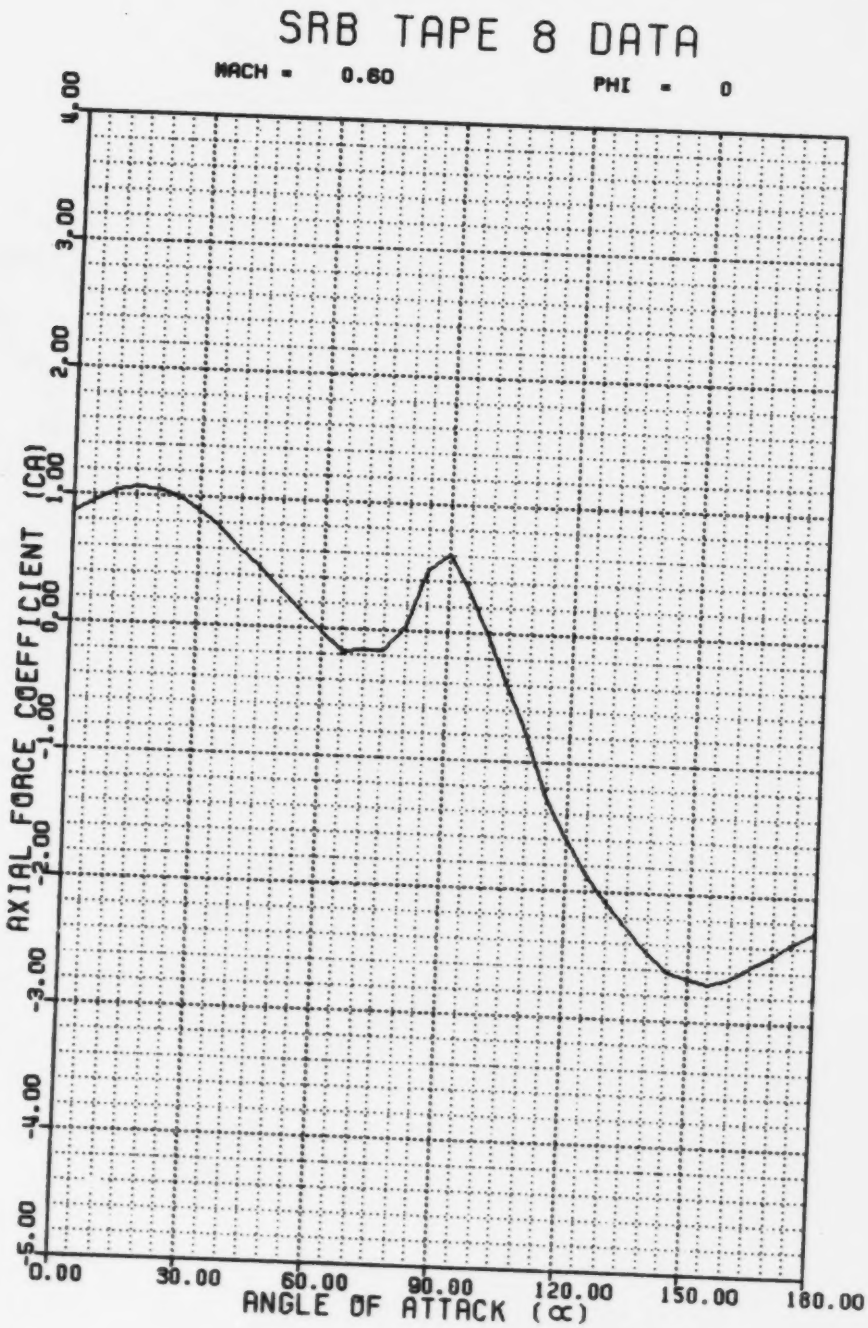
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-1.00
-2.00
-3.00
-4.00
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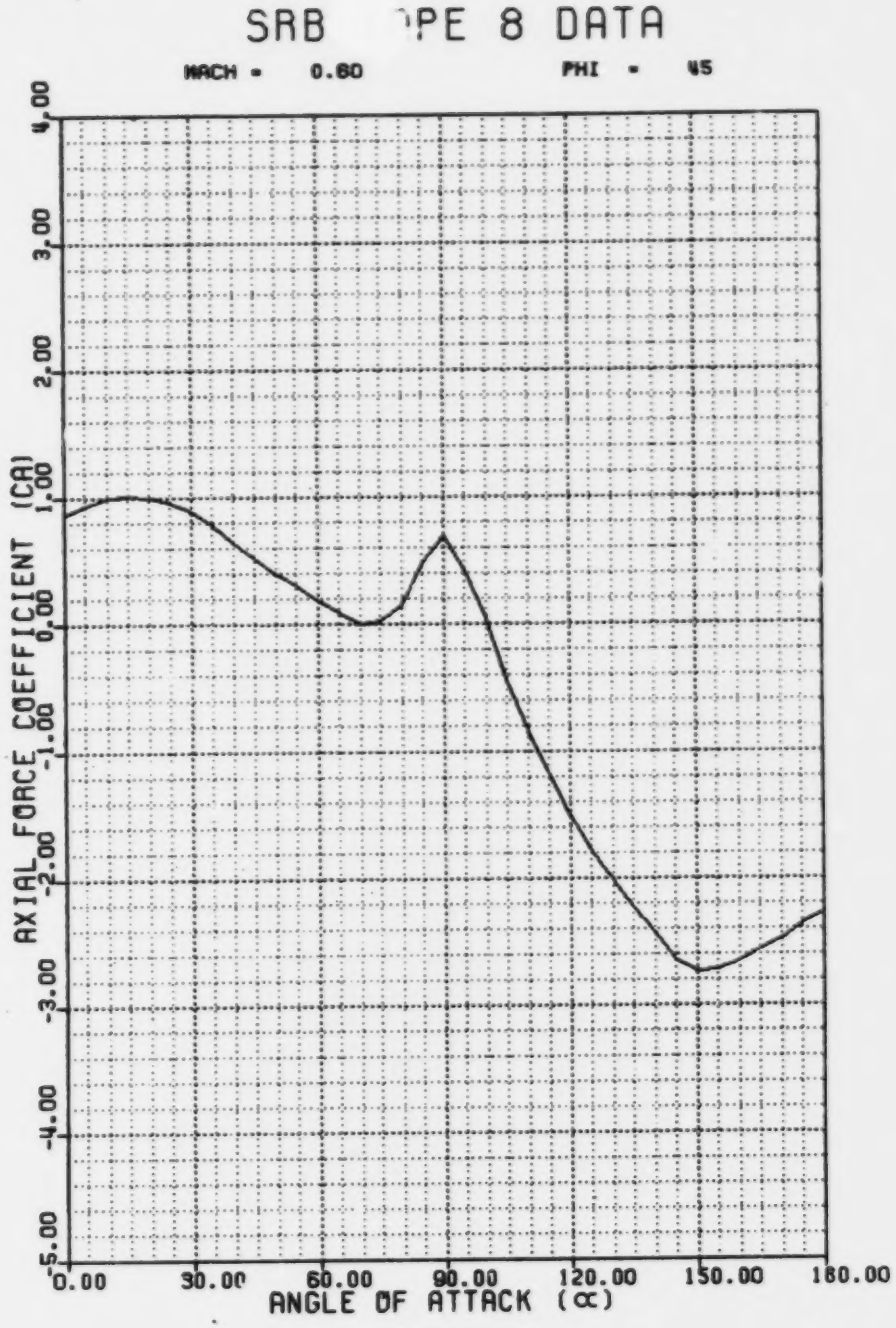
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB PE 8 DATA
MACH = 0.80
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-1.00
-2.00
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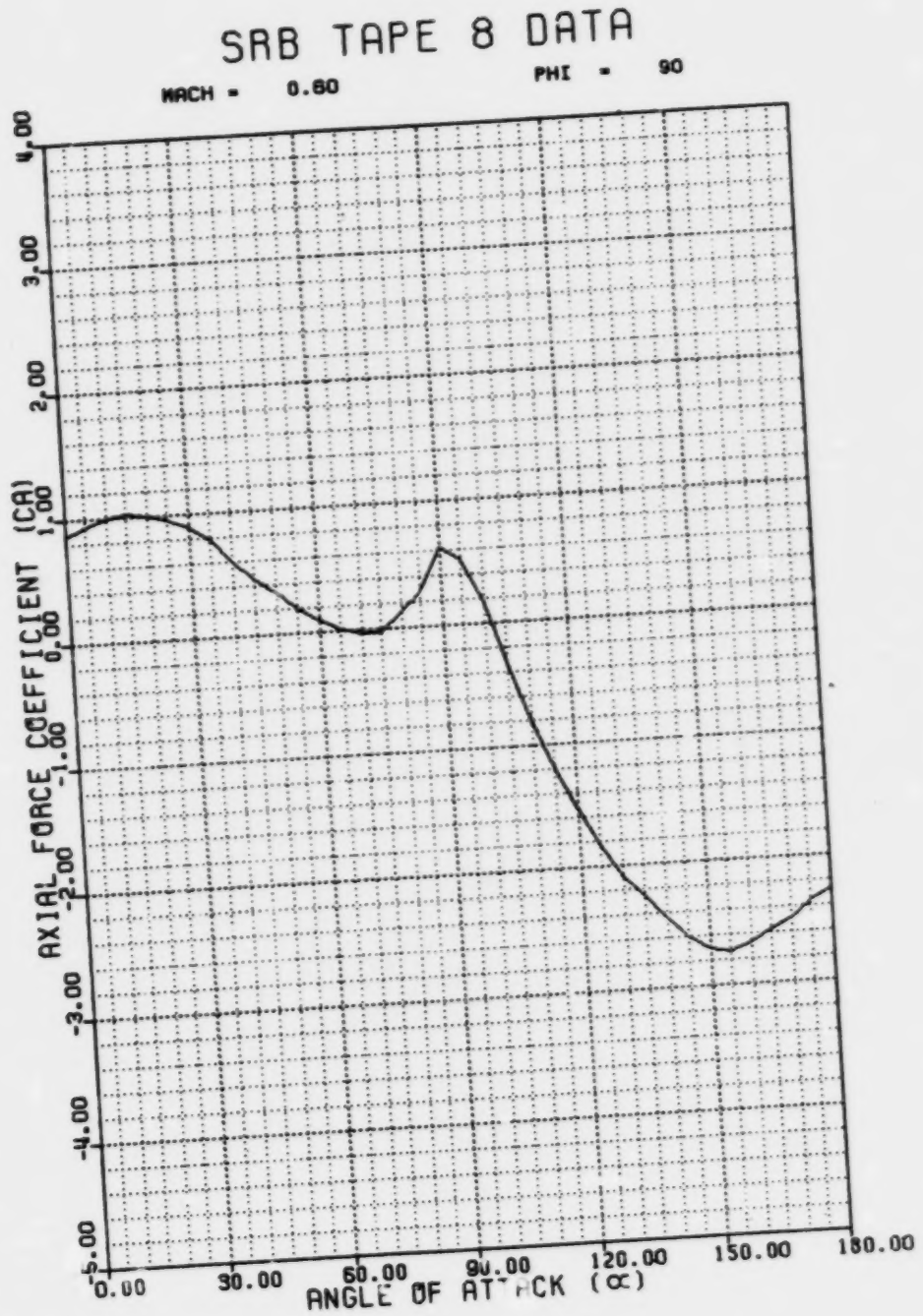
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-1.00
-2.00
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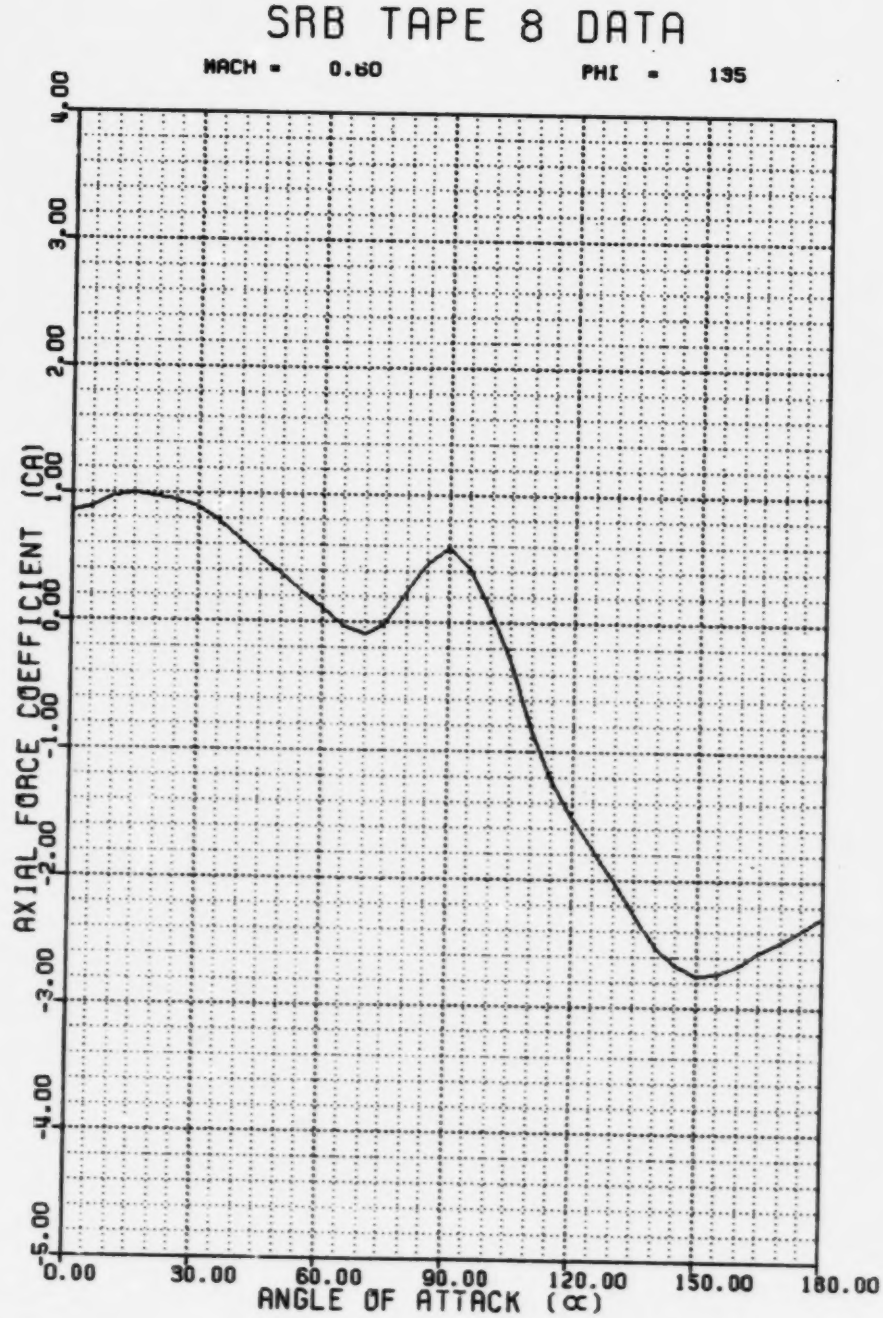
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-1.00
-2.00
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0.00
30.00
60.00
90.00
120.00
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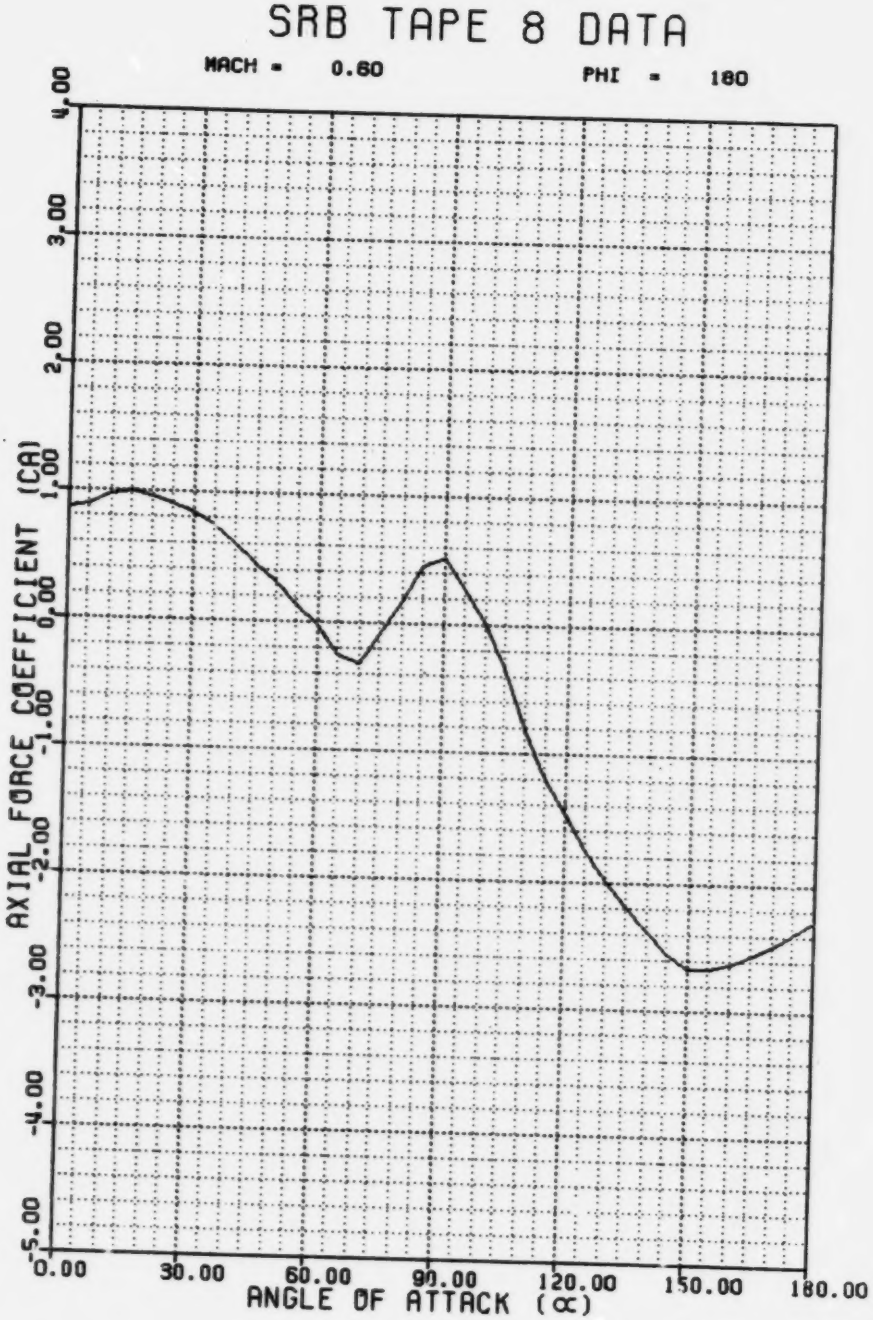
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
PHI = 180
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2.00
1.00
0.00
-1.00
-2.00
-3.00
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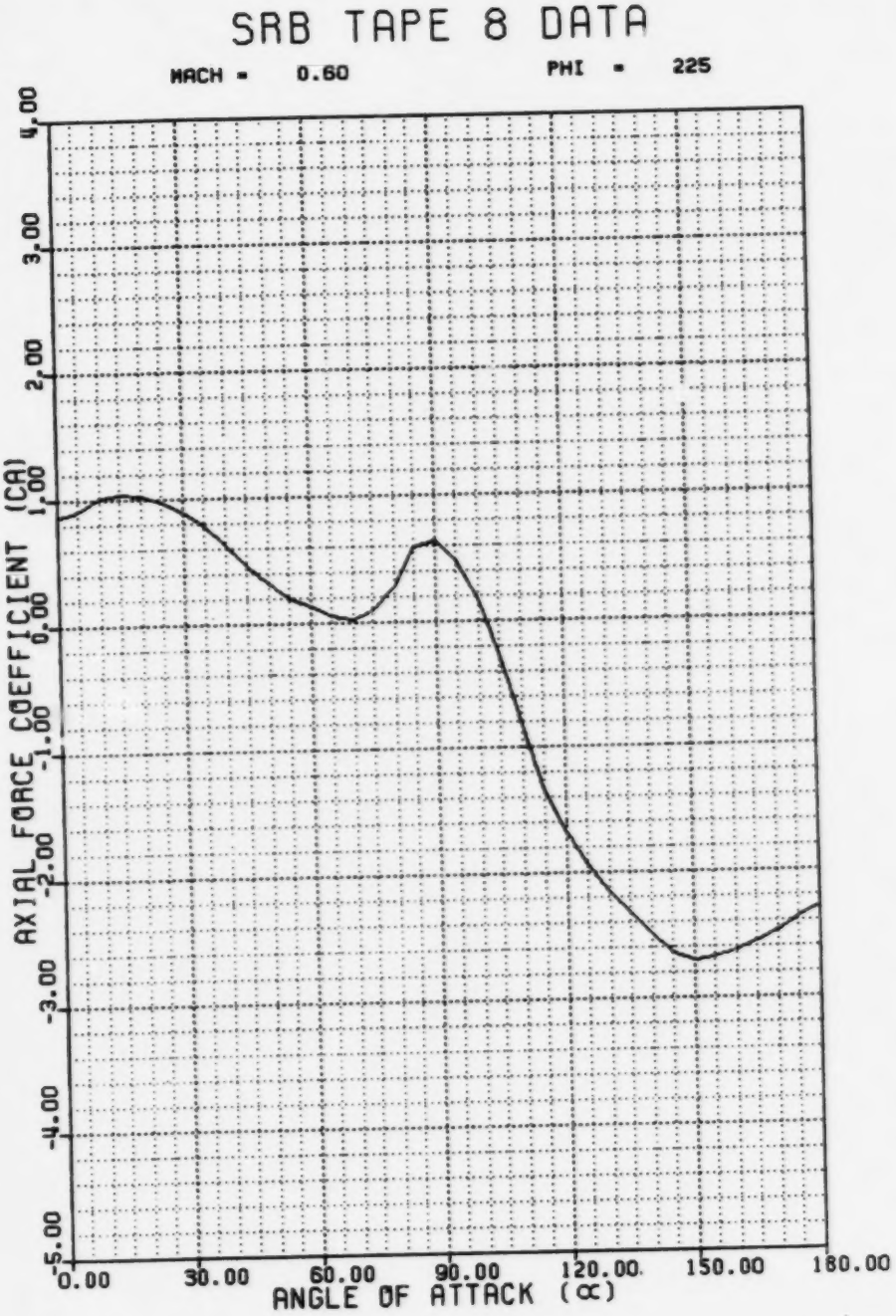
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-808


SRB TAPE 8 DATA
MACH = 0.60
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-1.00
-2.00
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-4.00
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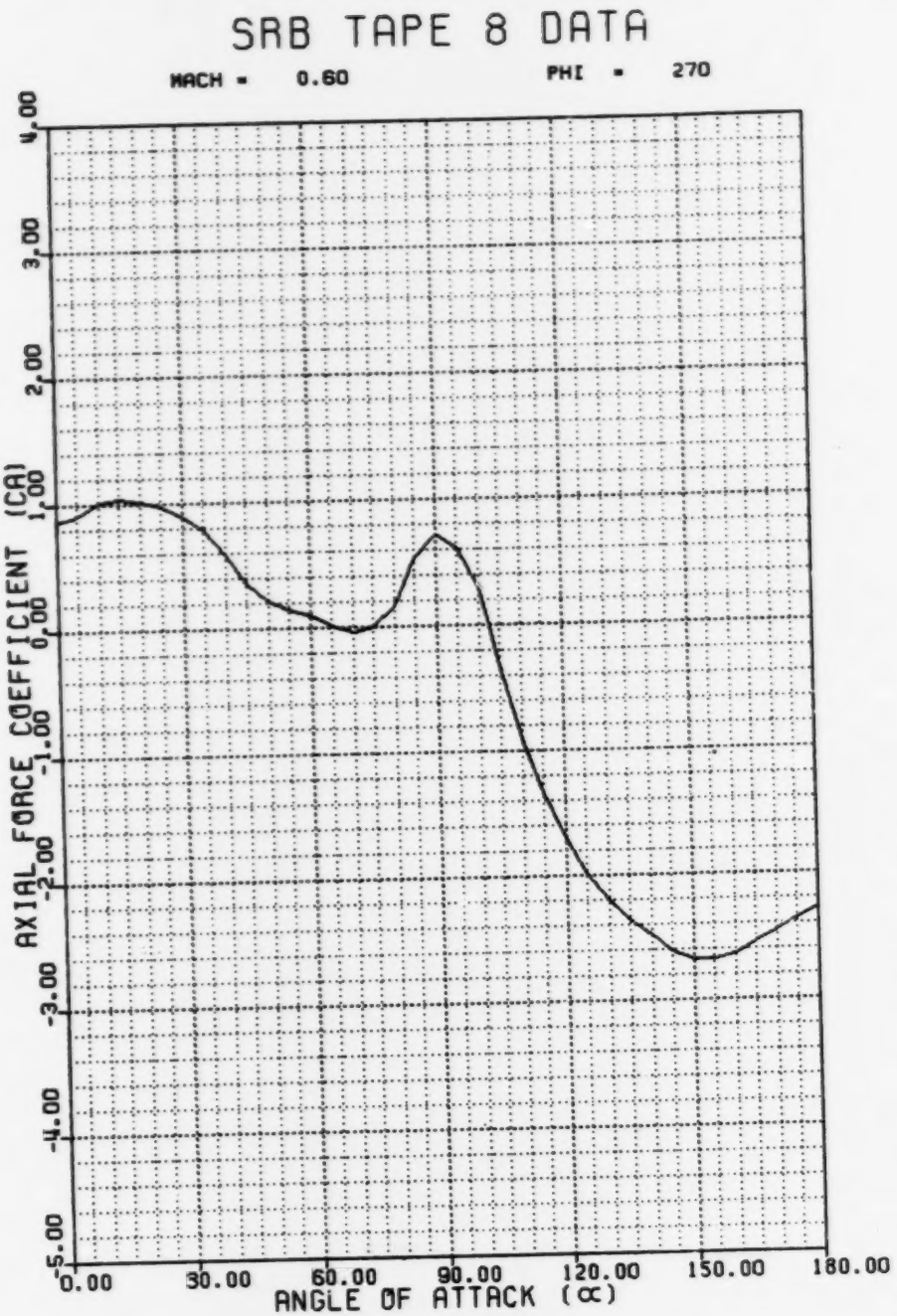
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.60
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0.00
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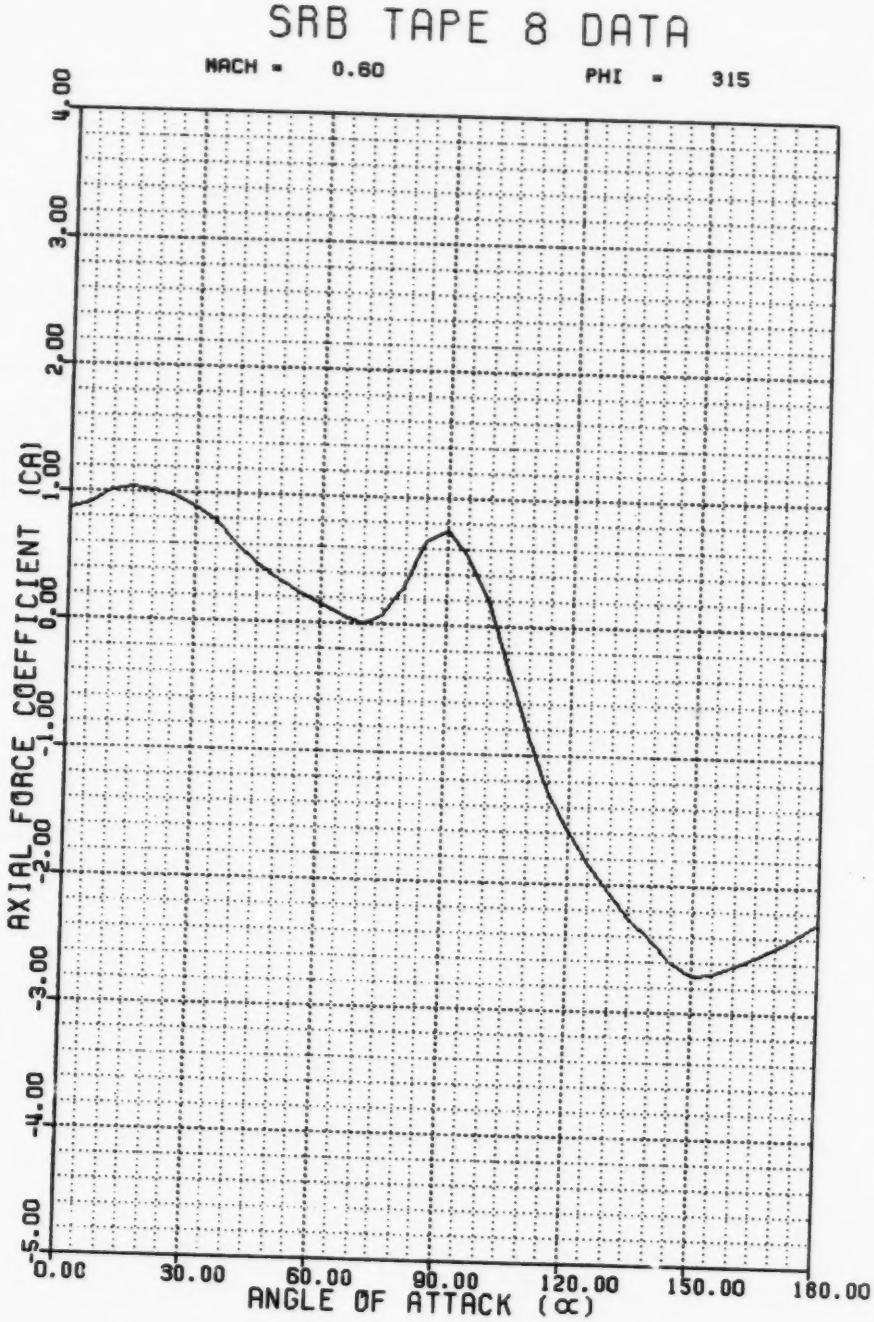
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
-1.00
-2.00
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0.00
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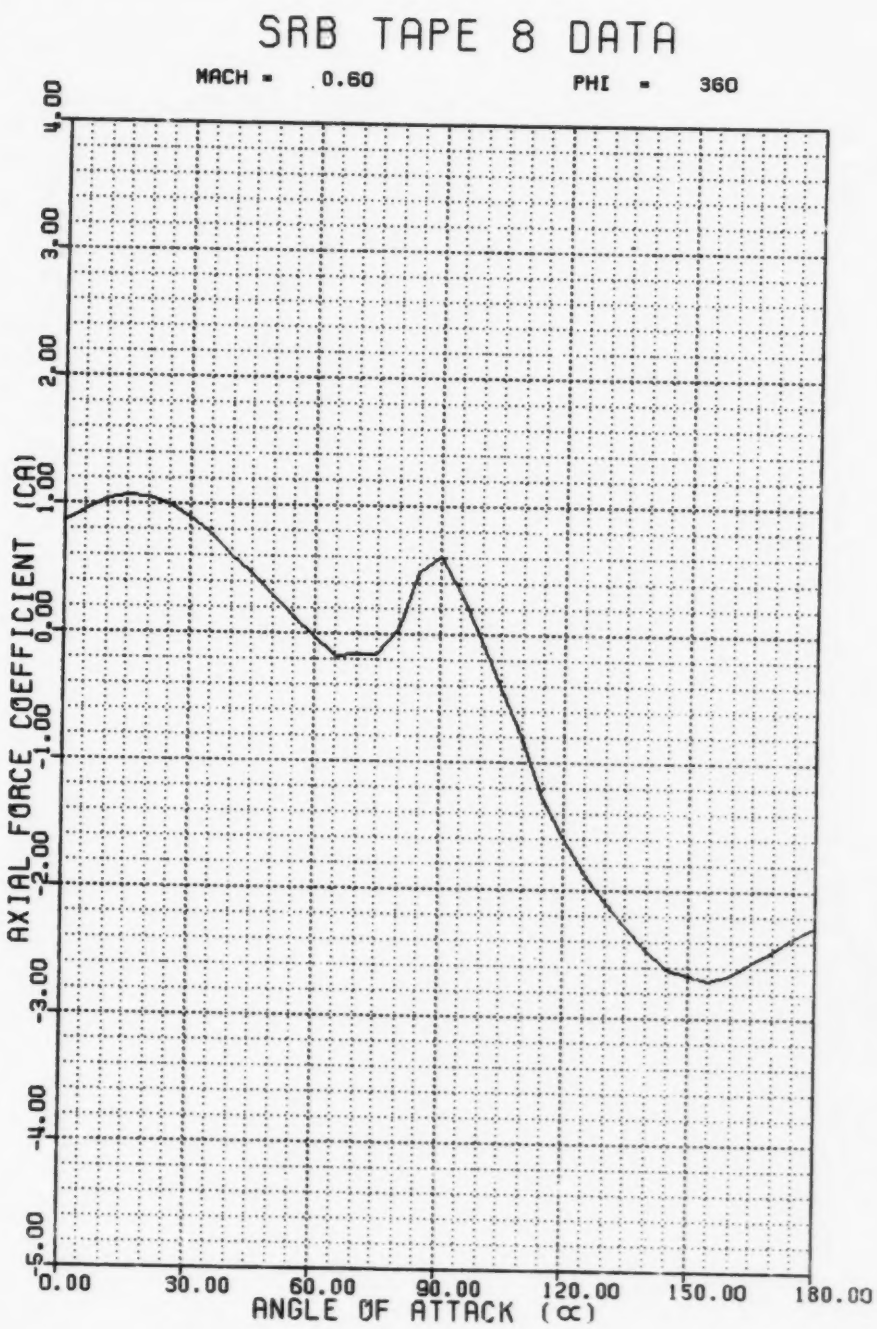
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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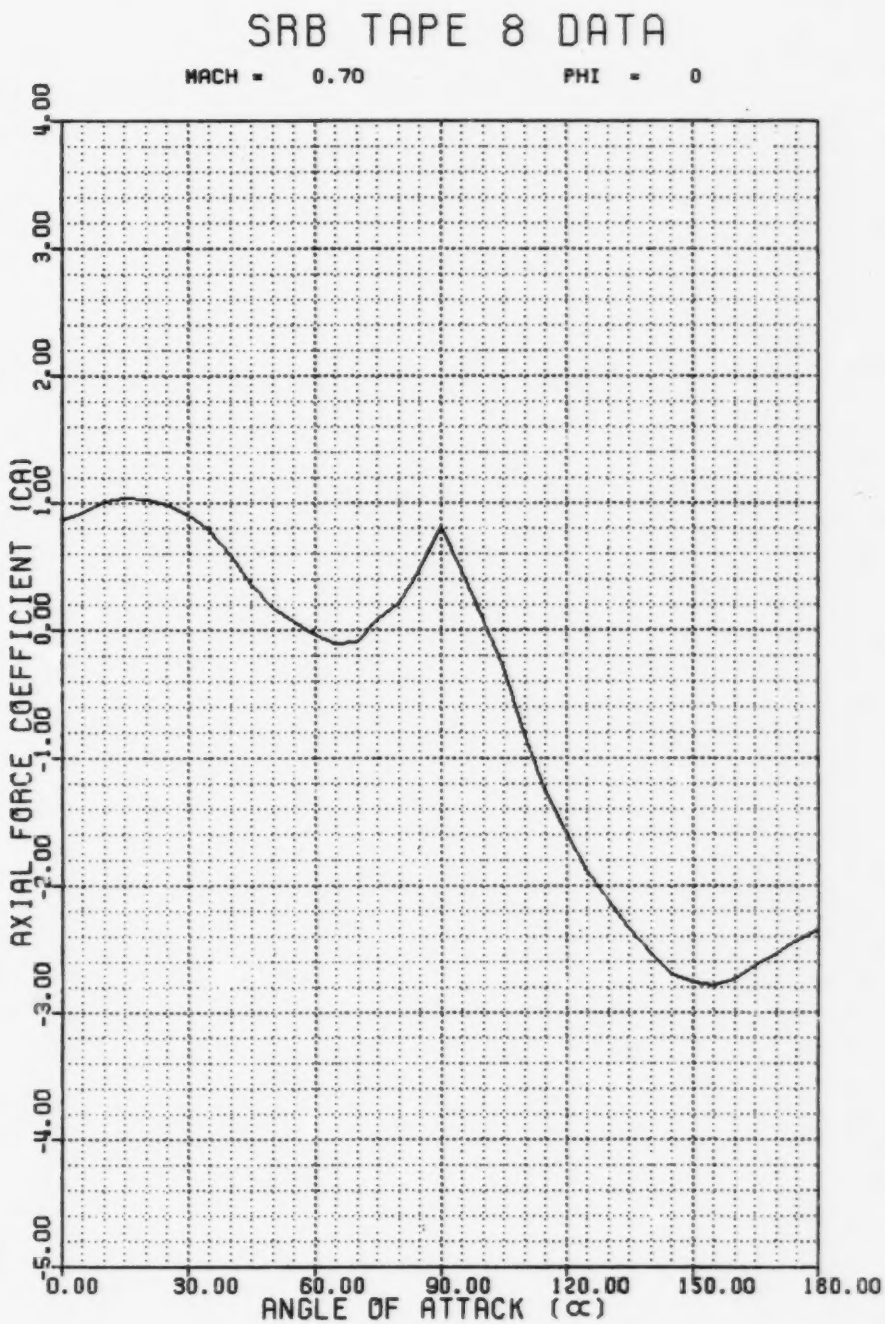
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-1.00
-2.00
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0.00
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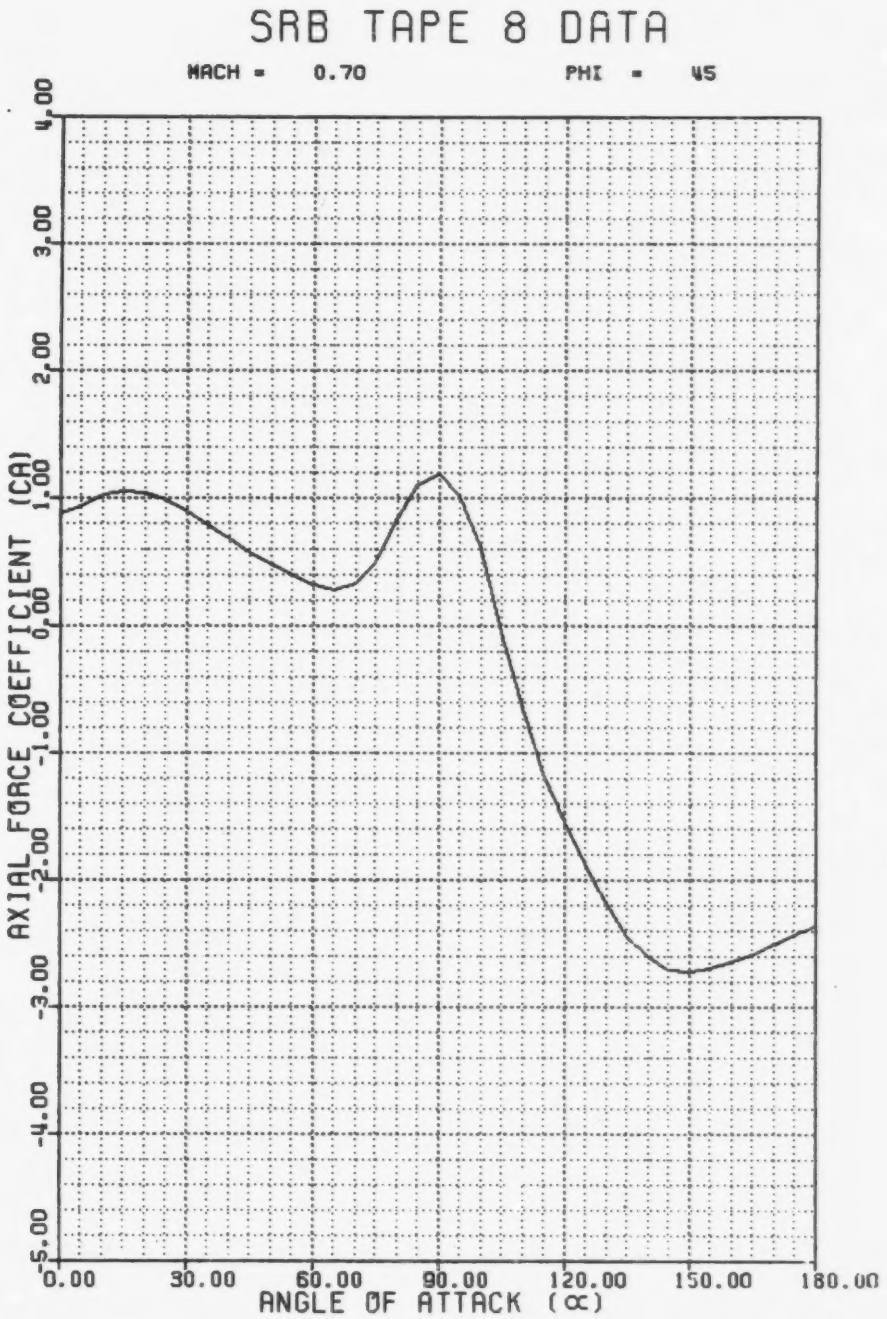
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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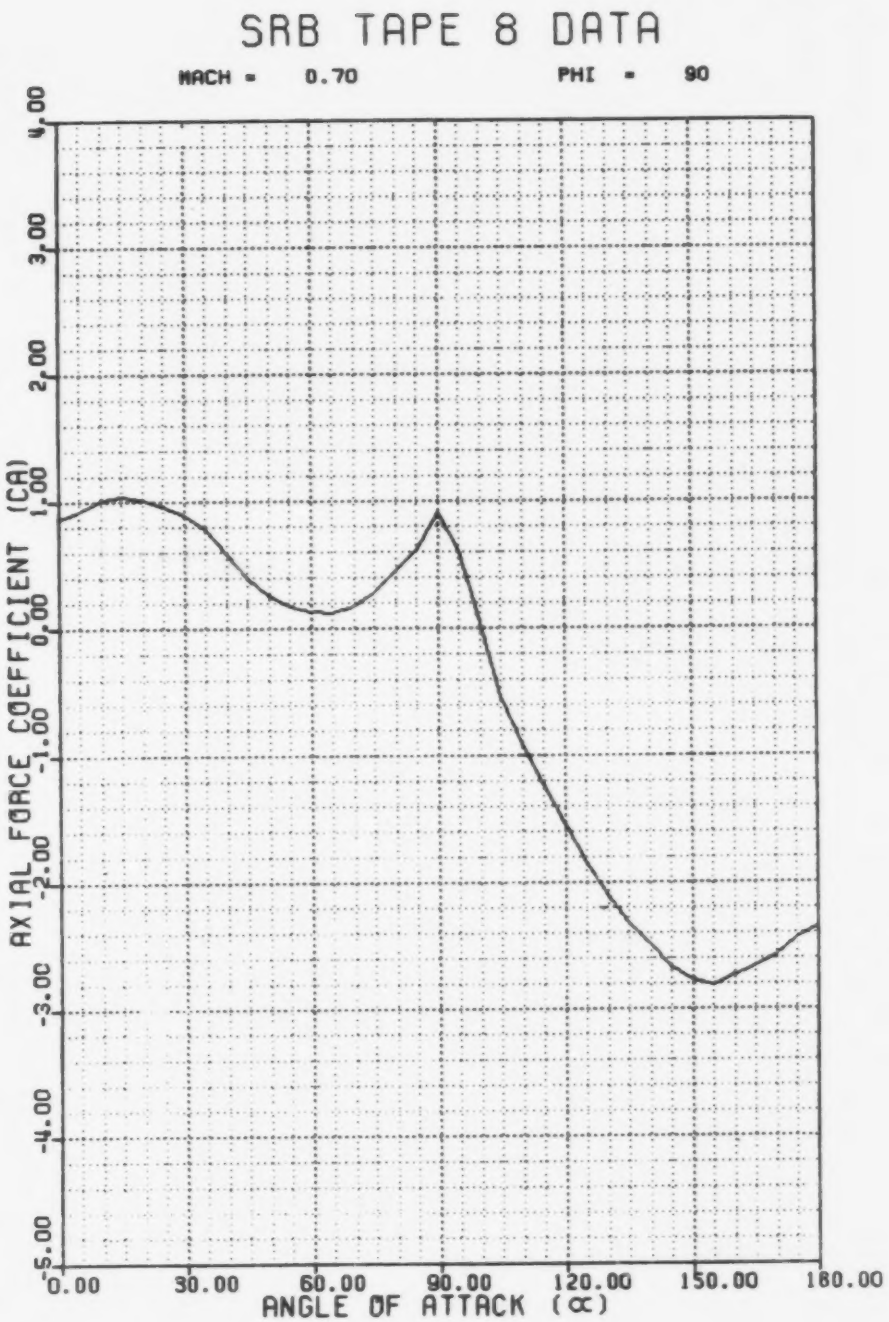
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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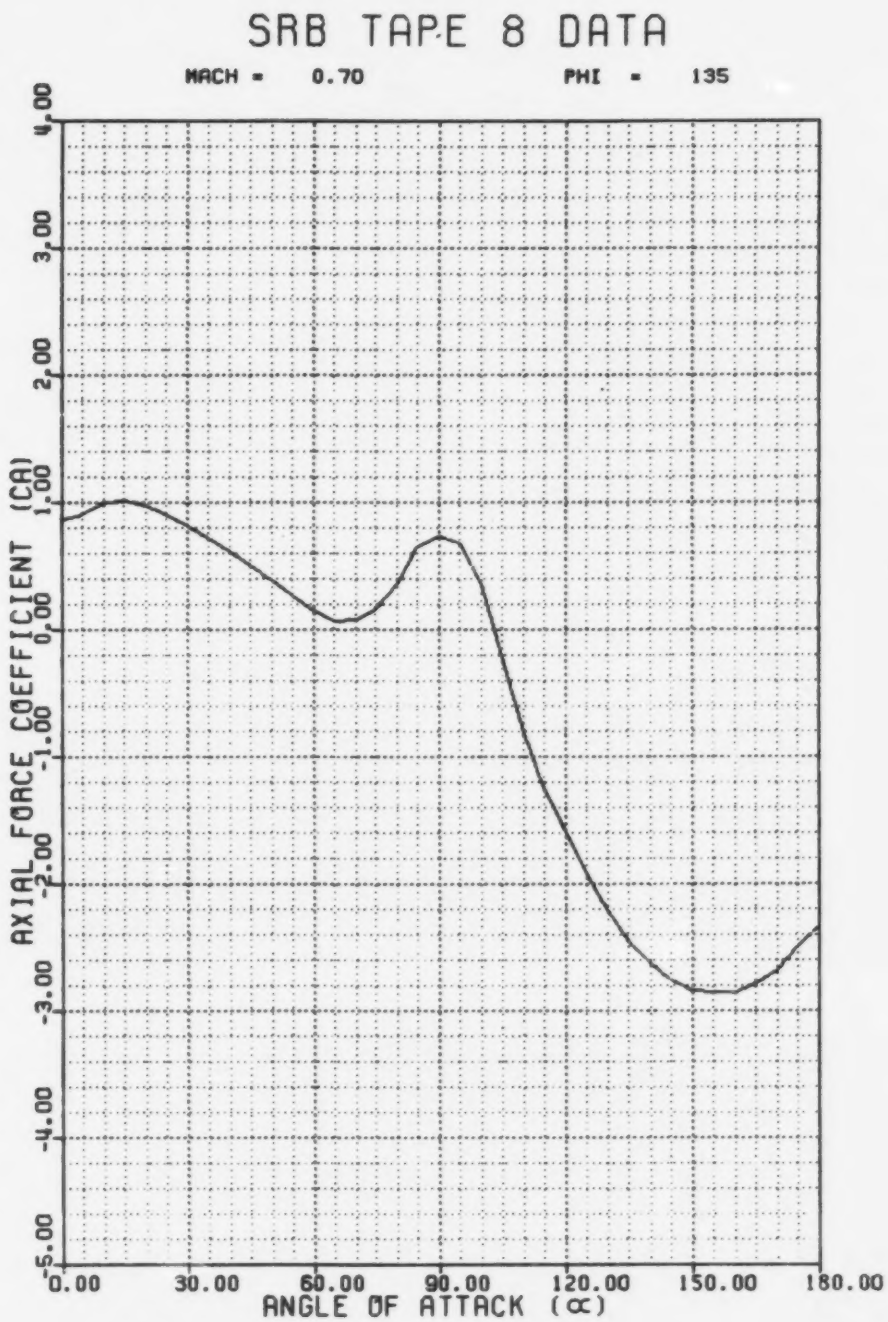
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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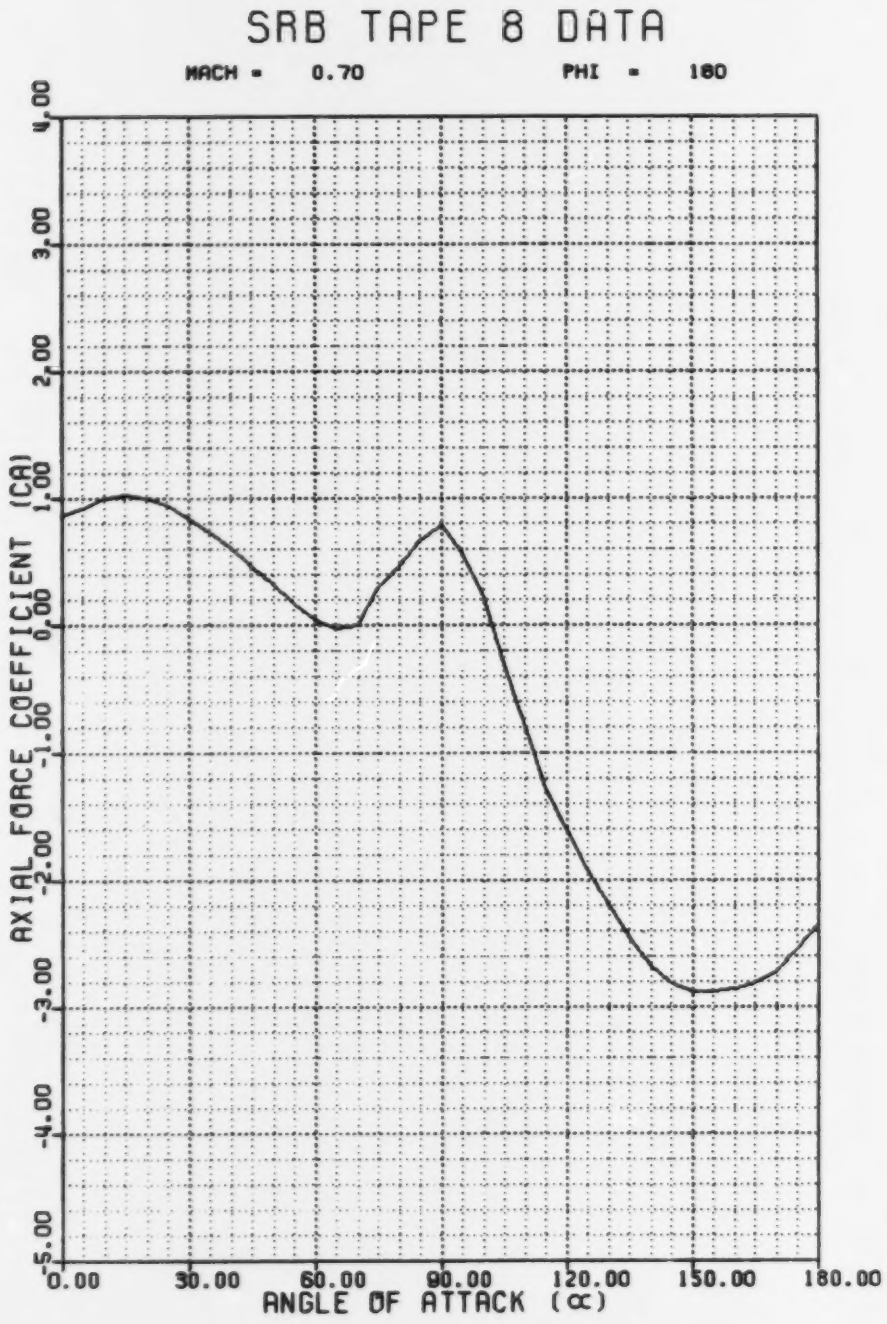
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-1.00
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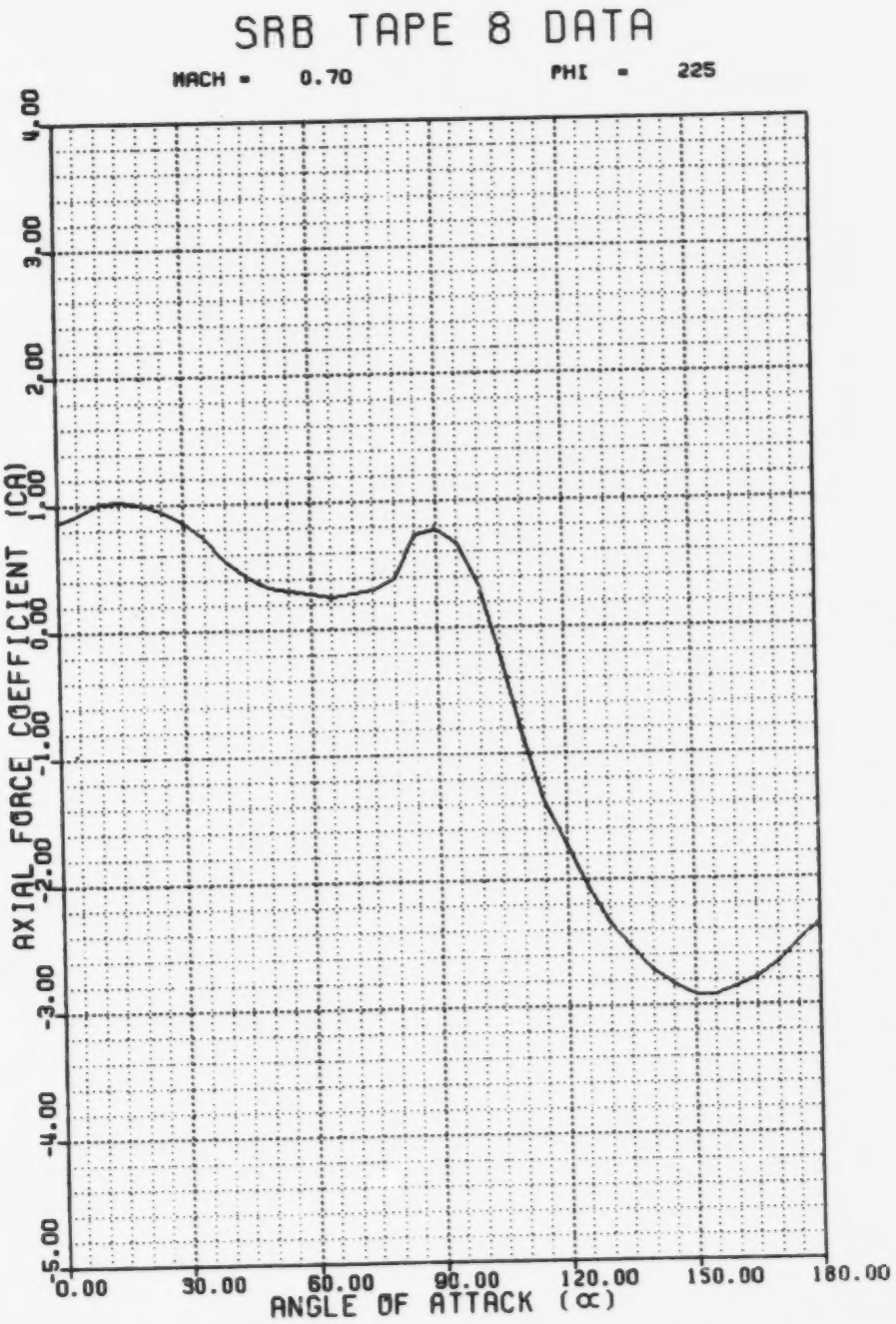
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
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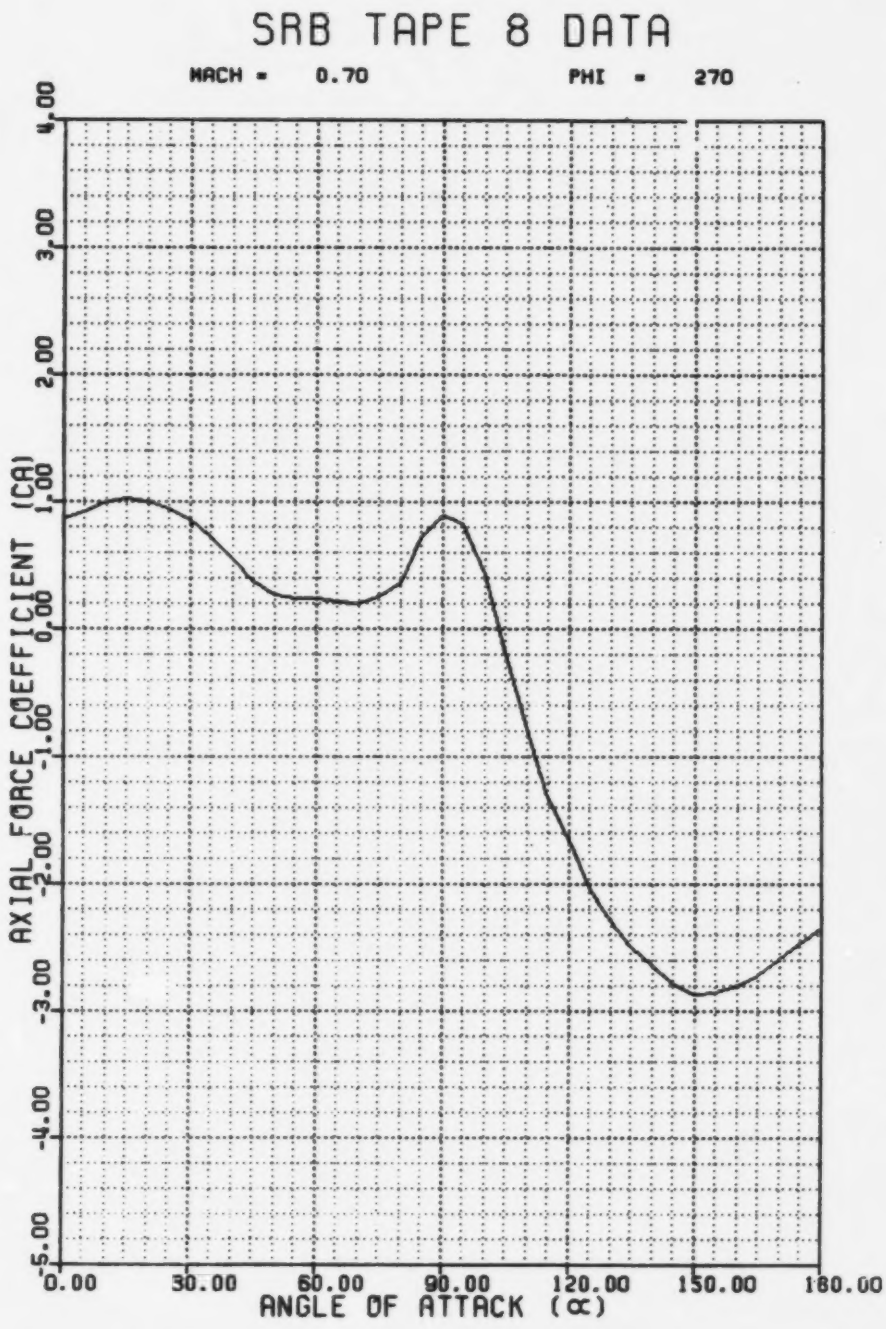
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
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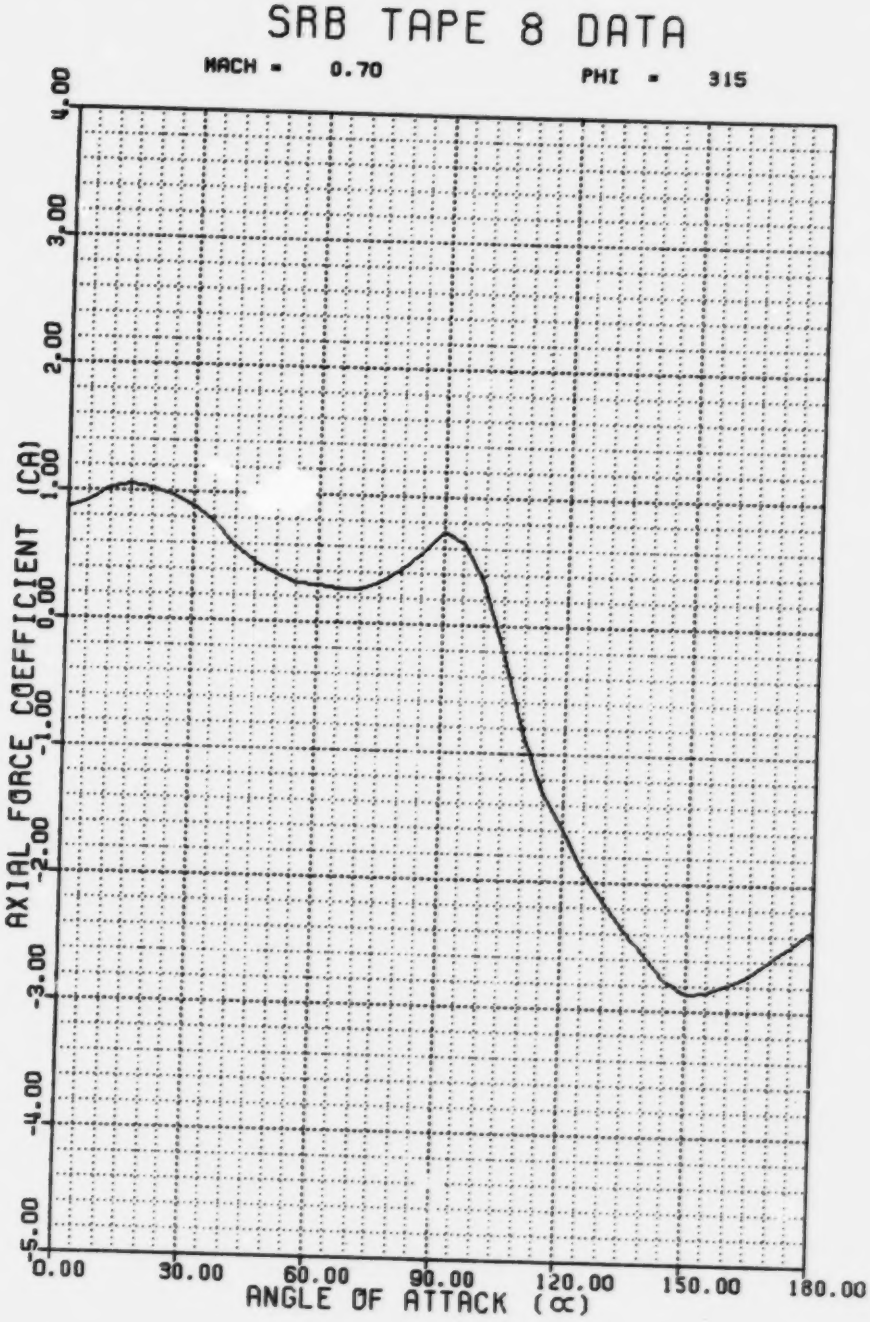
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 315
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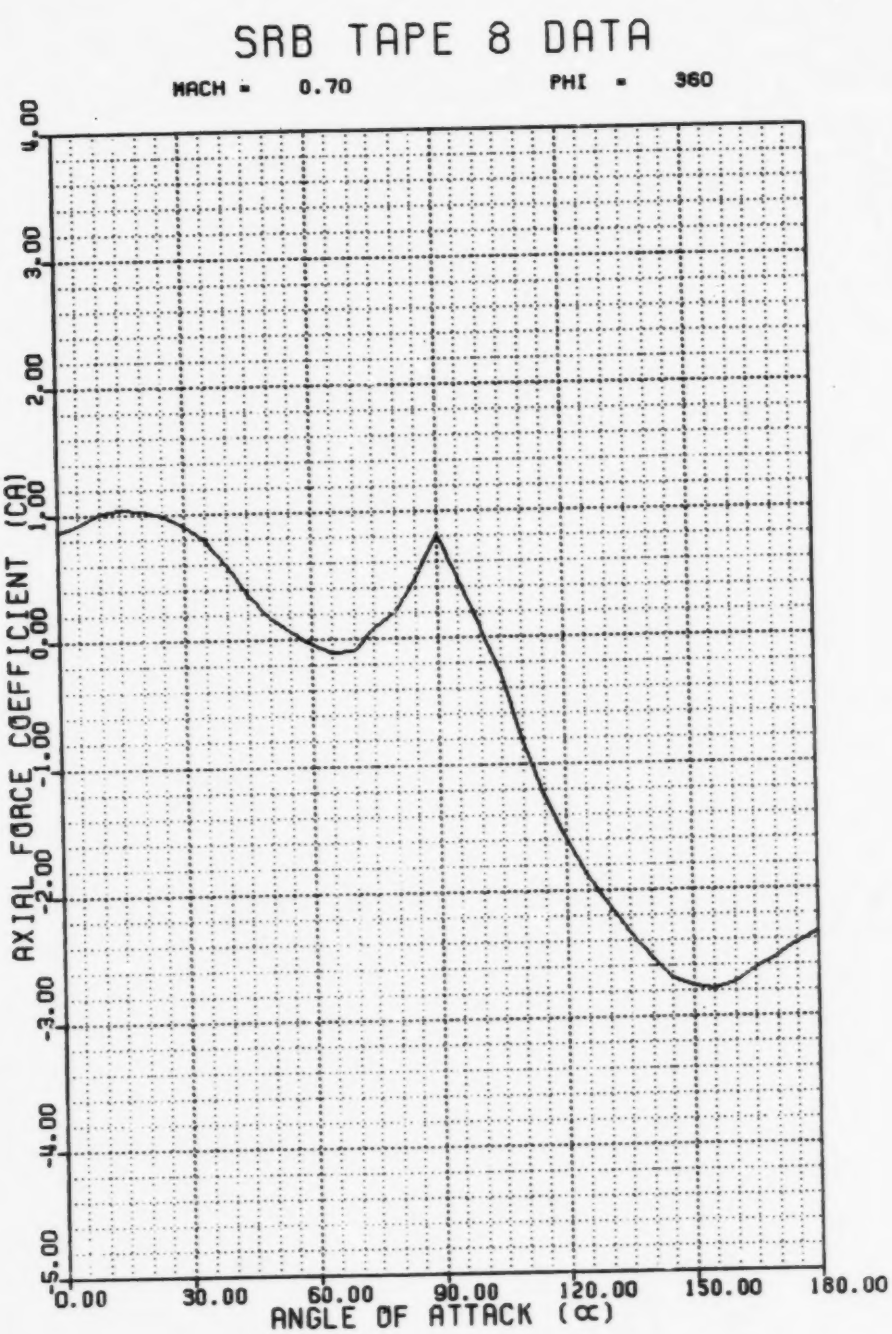
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
PHI = 360
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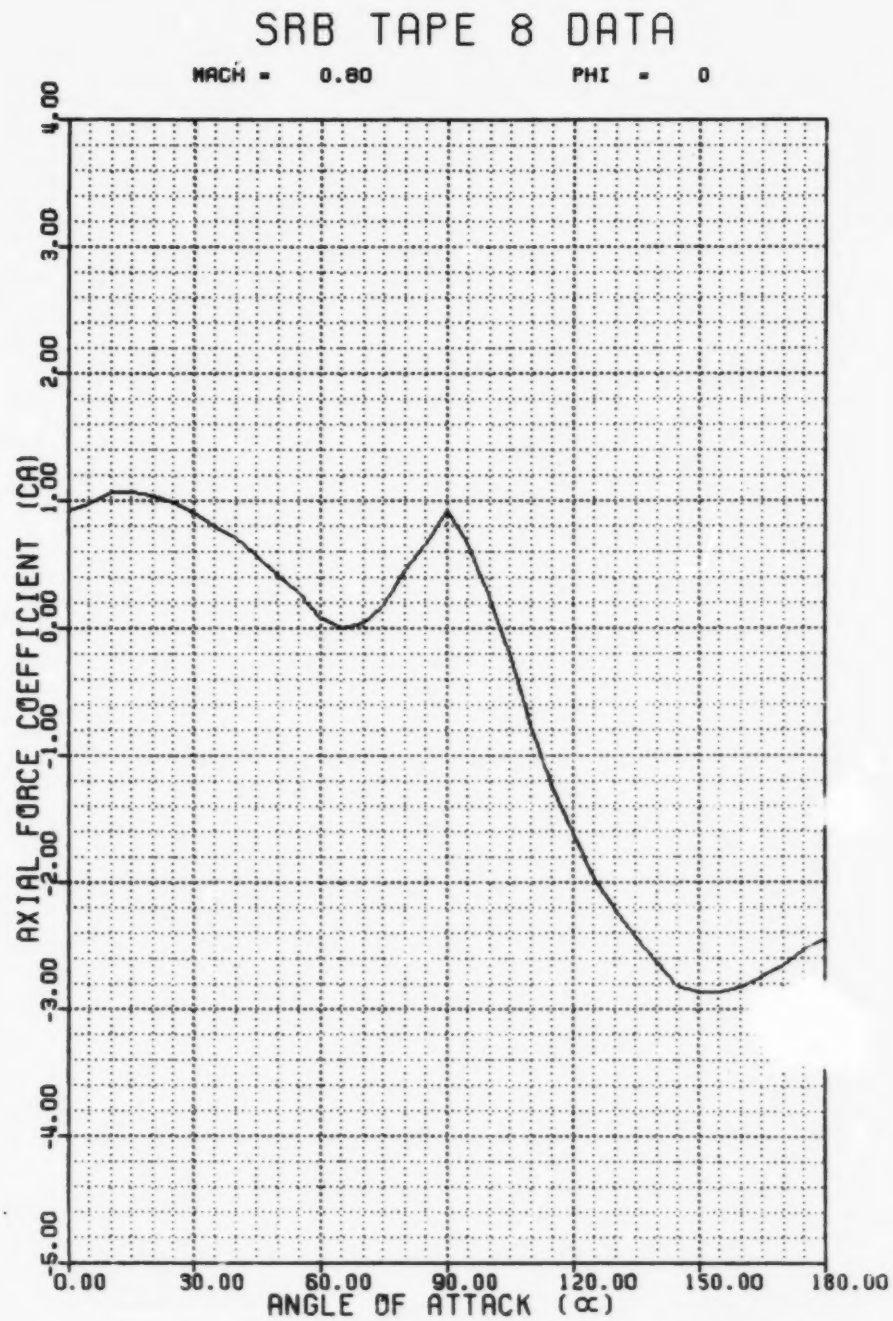
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
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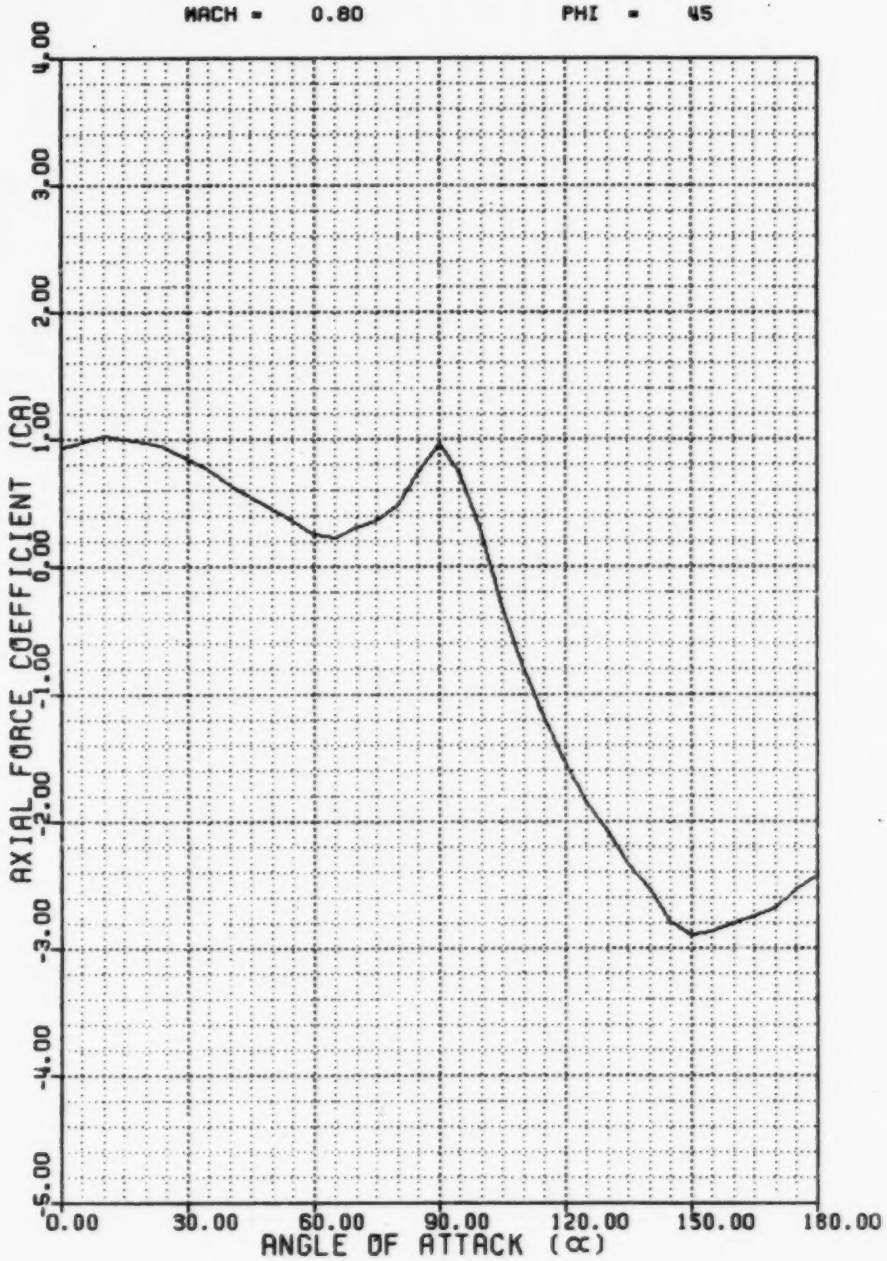
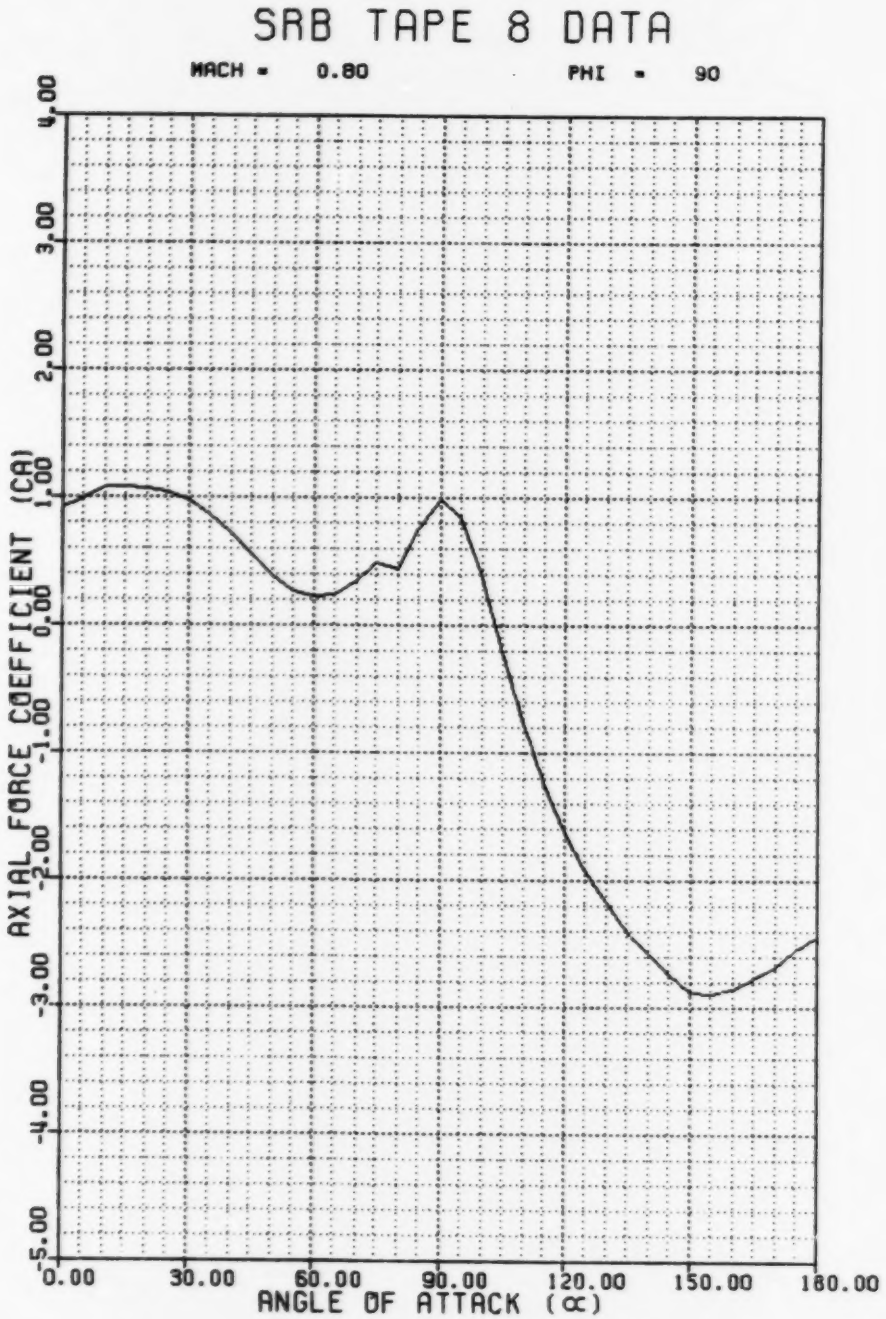
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.80 PHI = 45




SRB TAPE 8 DATA
MACH = 0.80
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2.00
1.00
0.00
-1.00
-2.00
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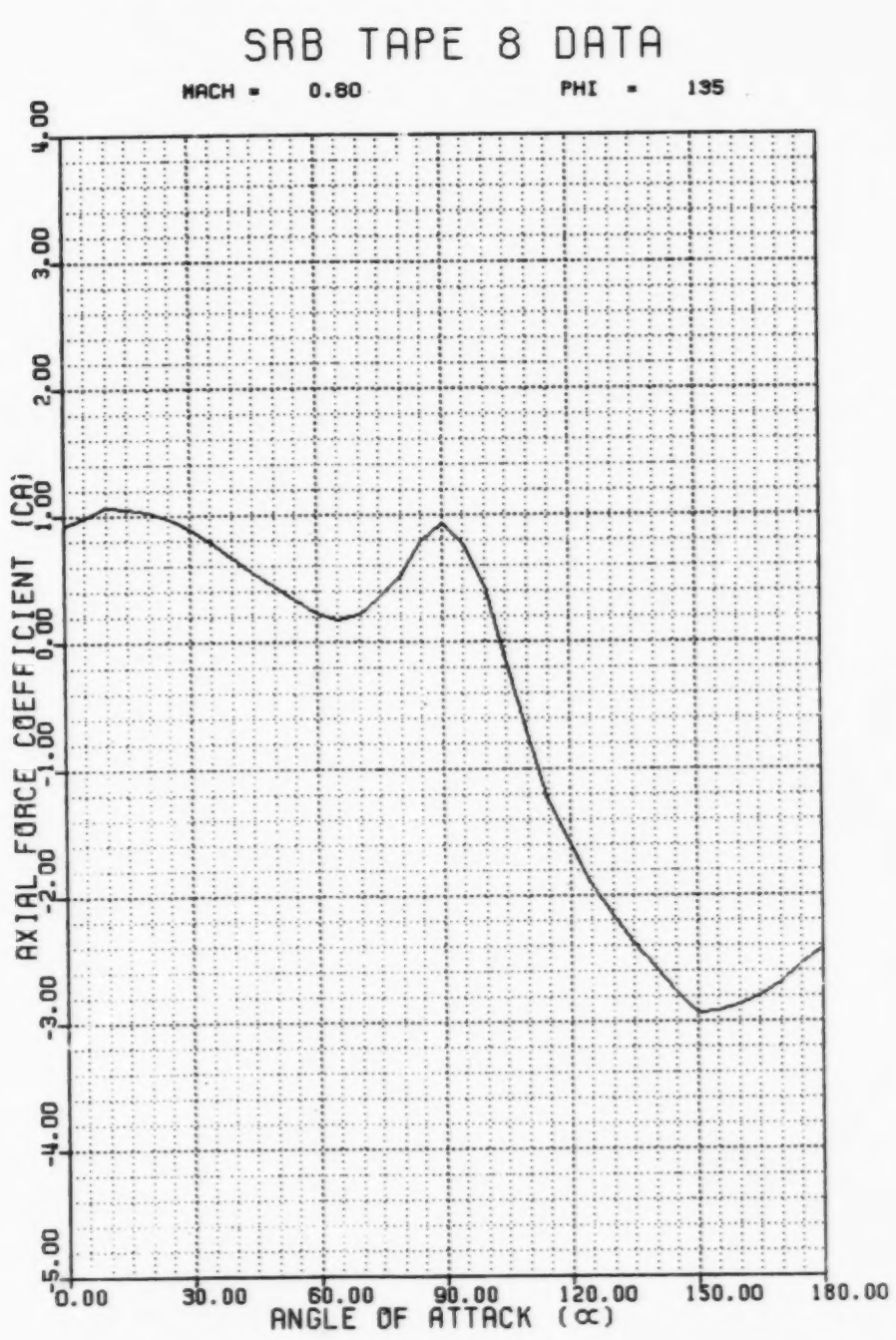
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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0.00
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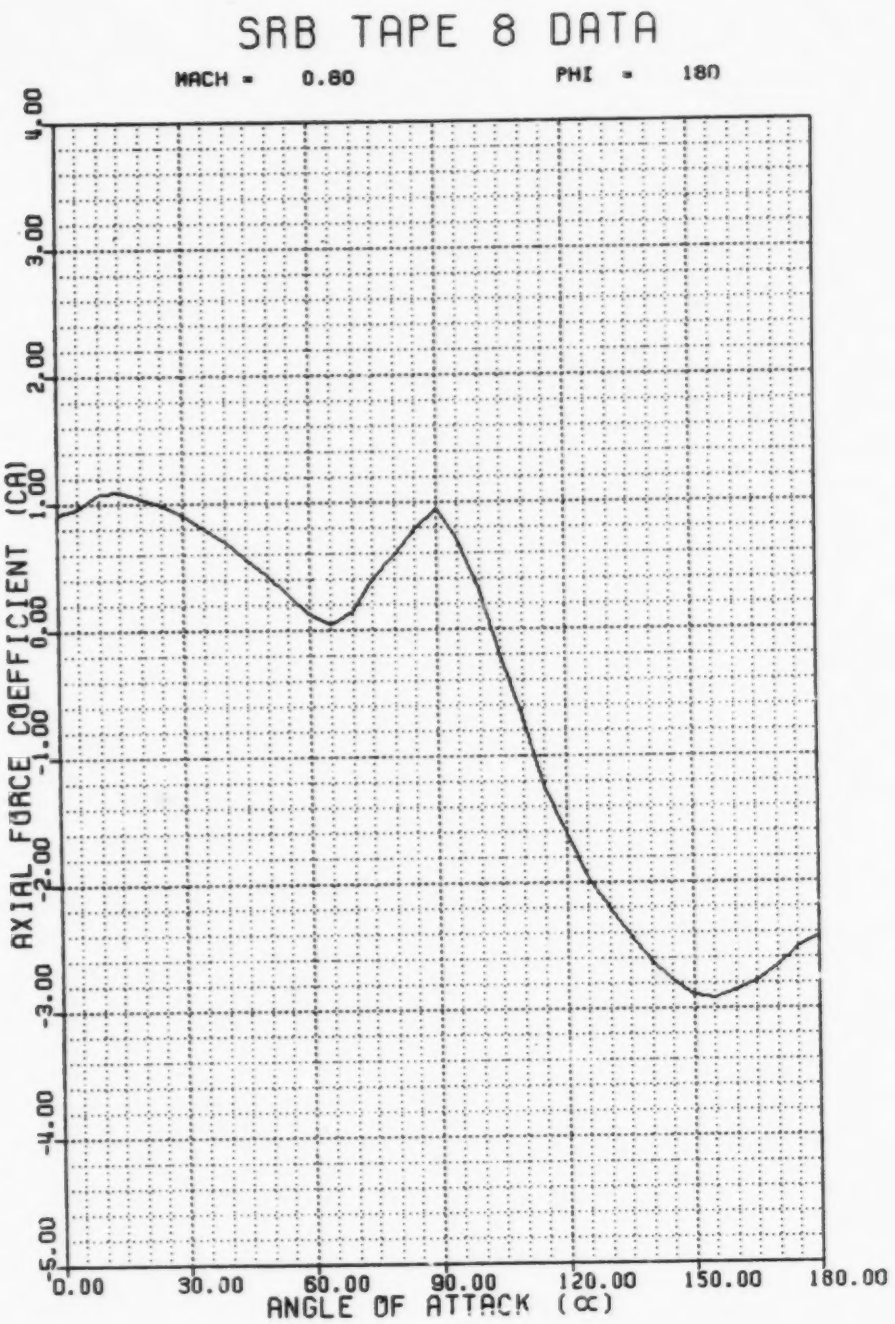
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-2.00
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0.00
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60.00
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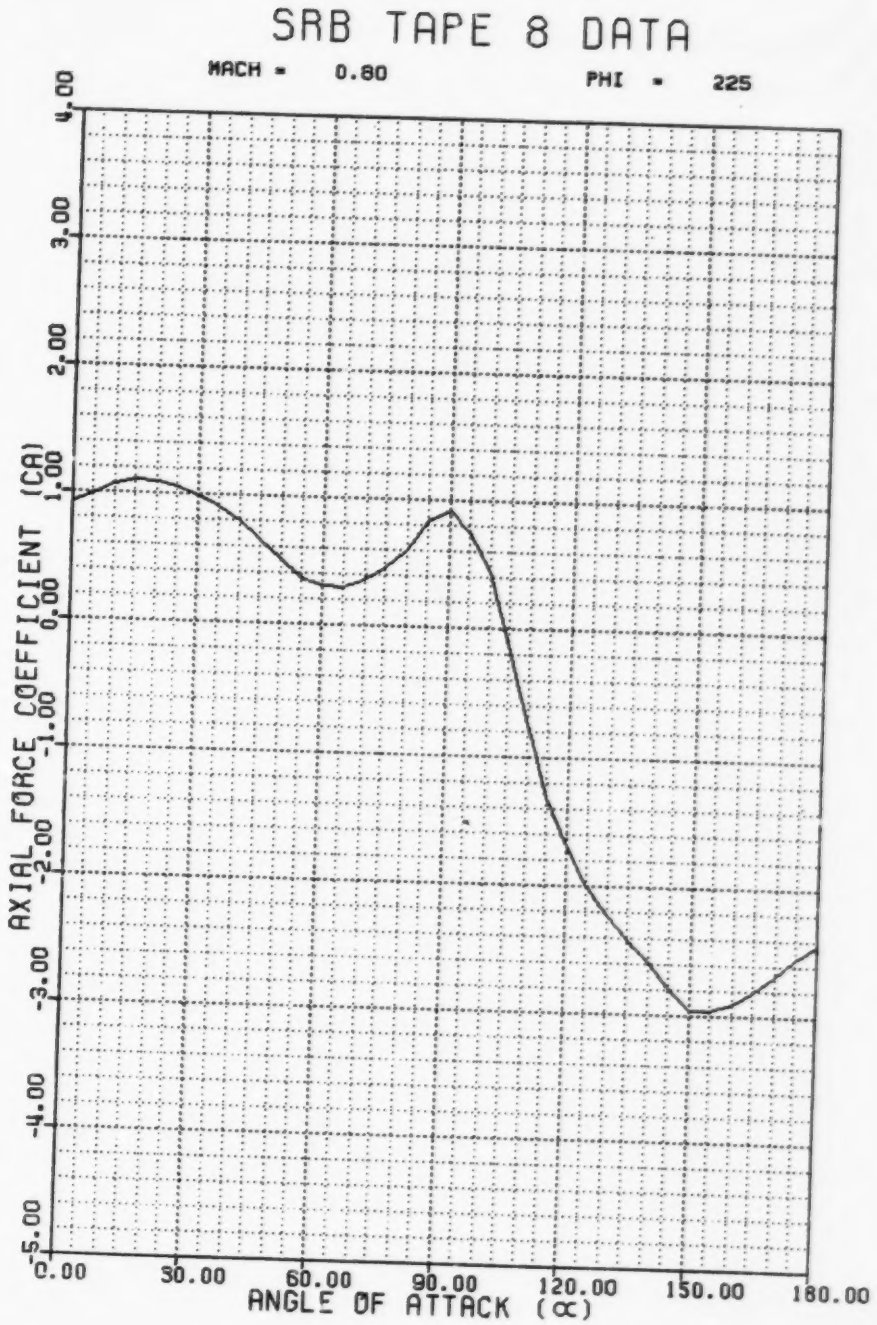
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-1.00
-2.00
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0.00
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90.00
120.00
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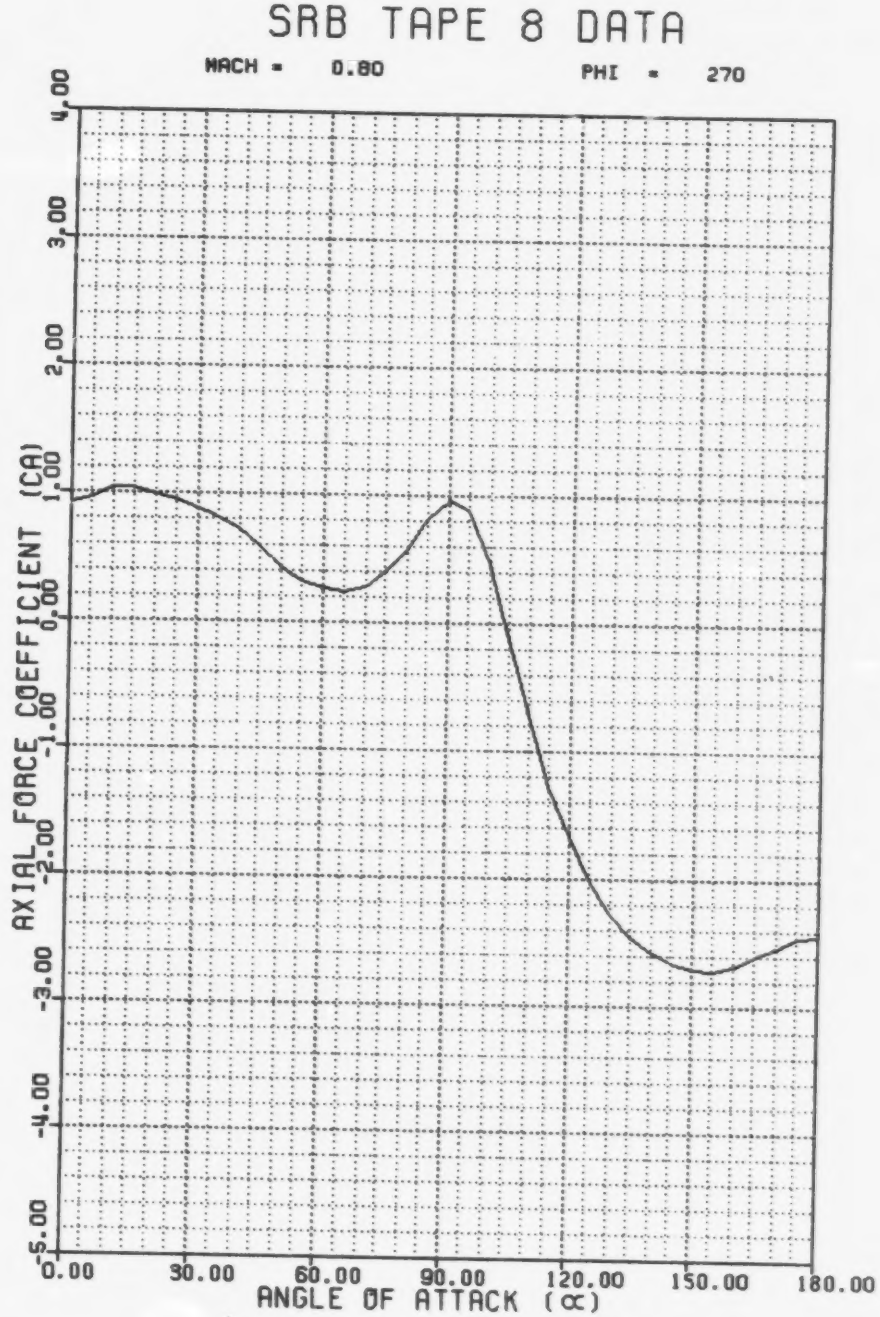
ANGLE OF ATTACK (α)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0.00
-1.00
-2.00
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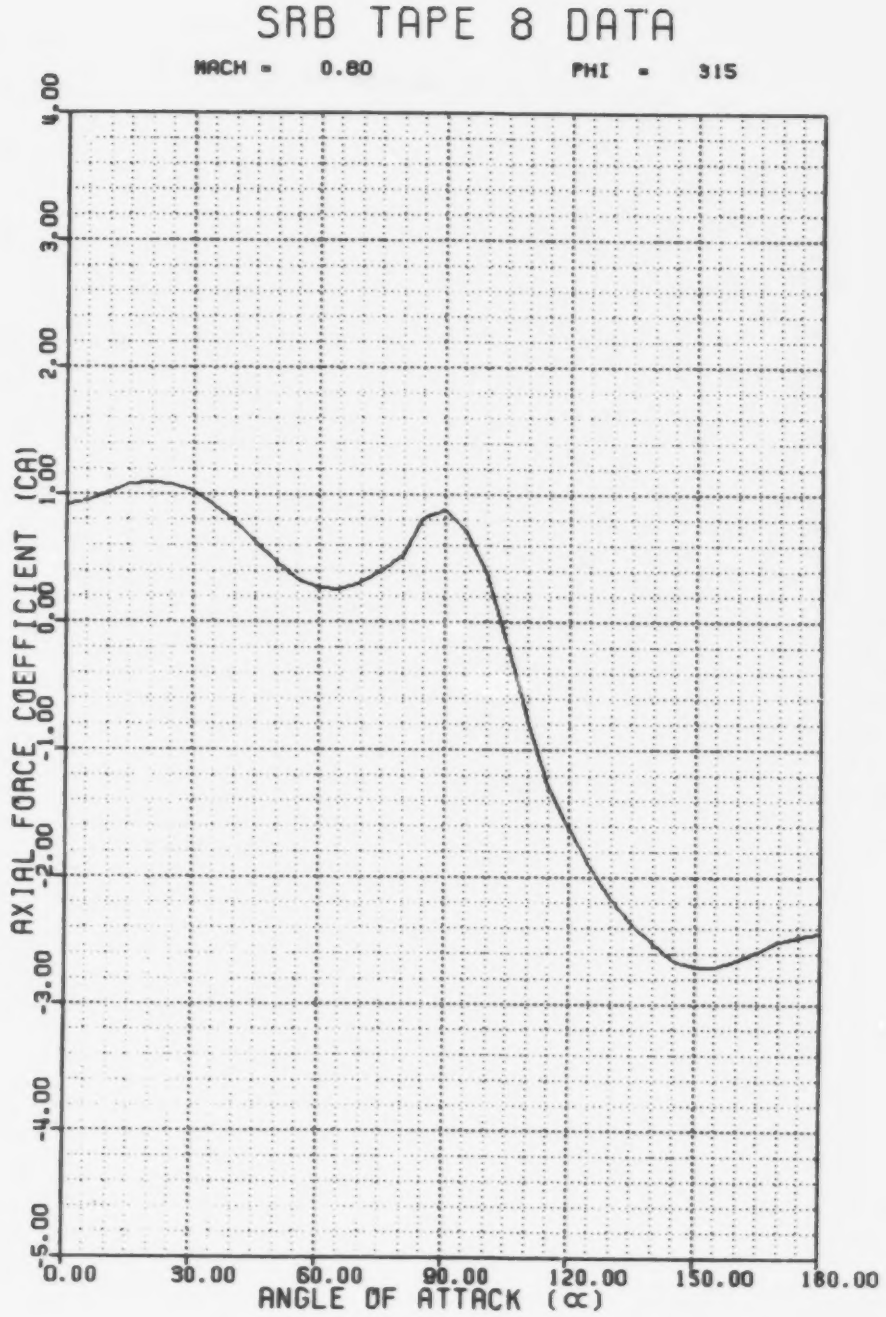
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.80
PHI = 315
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-1.00
-2.00
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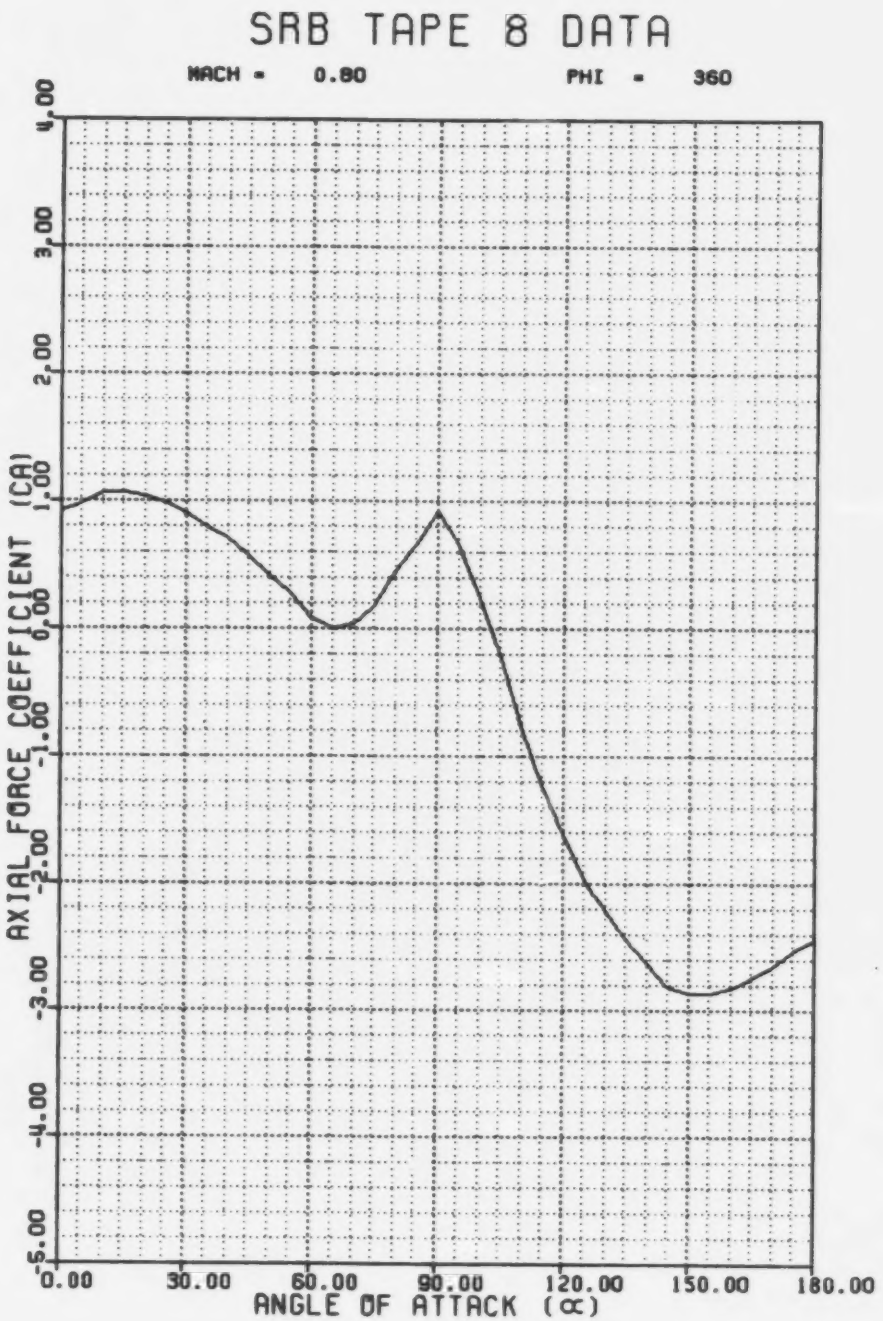
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 360
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2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
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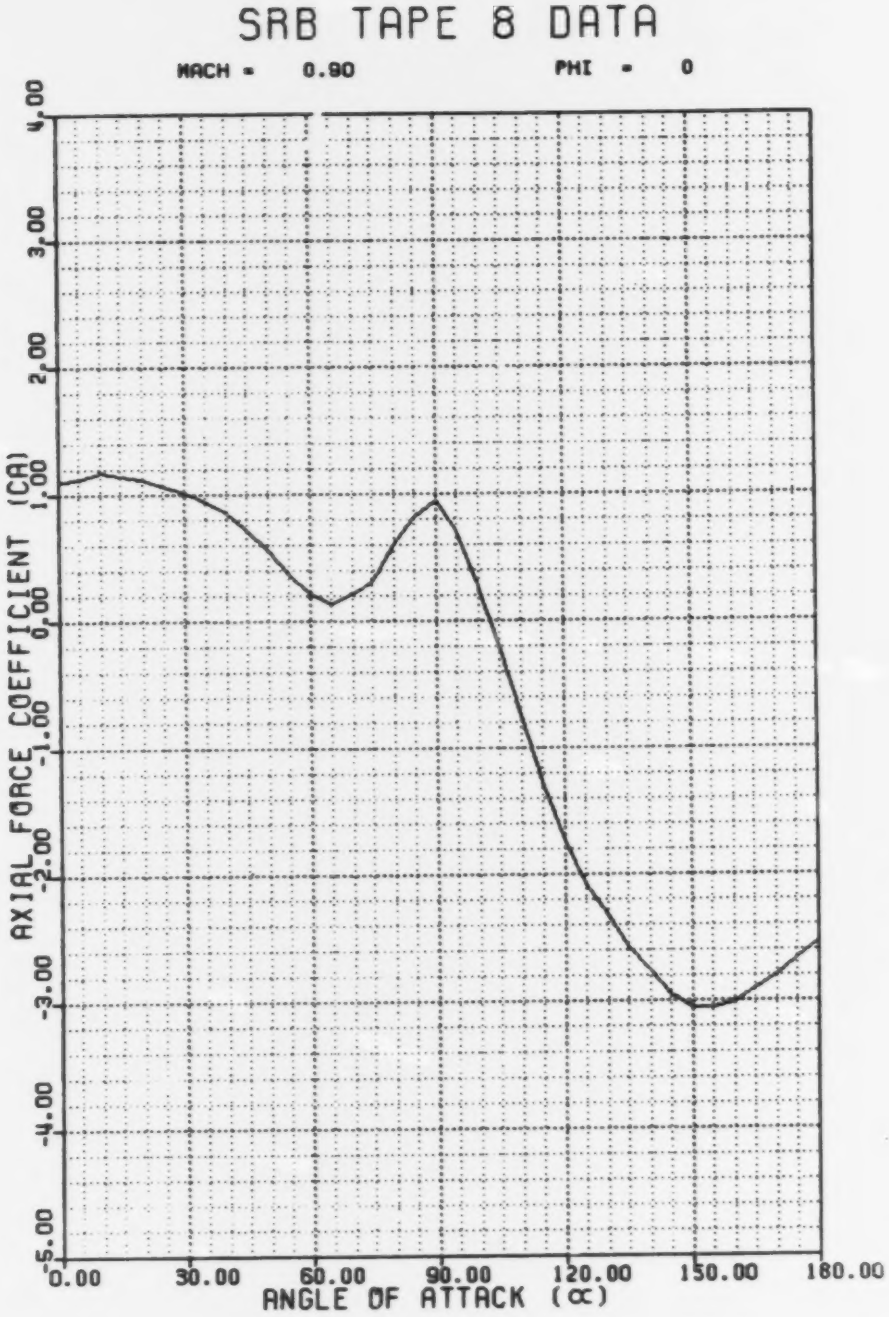
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 0
AXIAL FORCE COEFFICIENT (CA)
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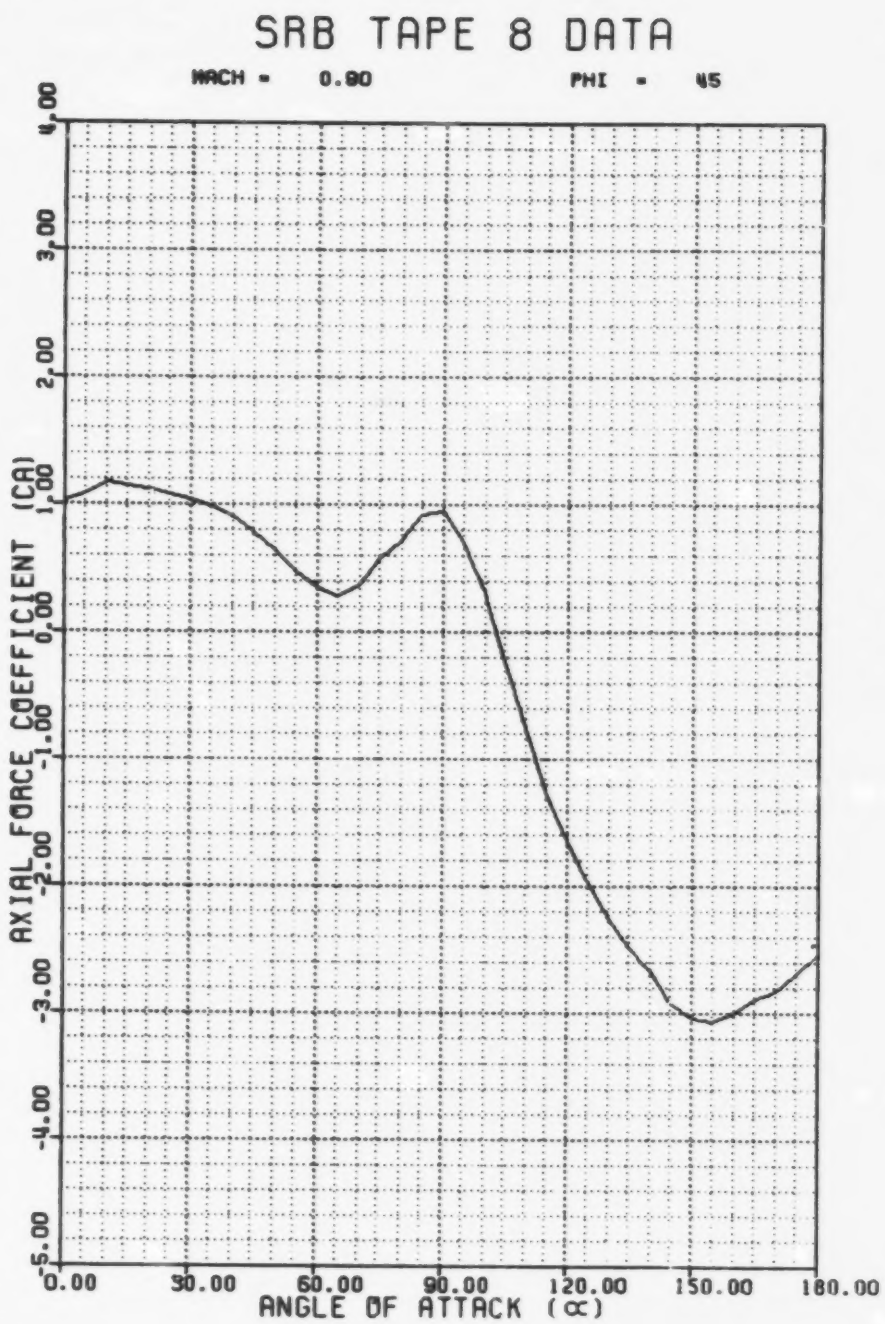
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
-3.00
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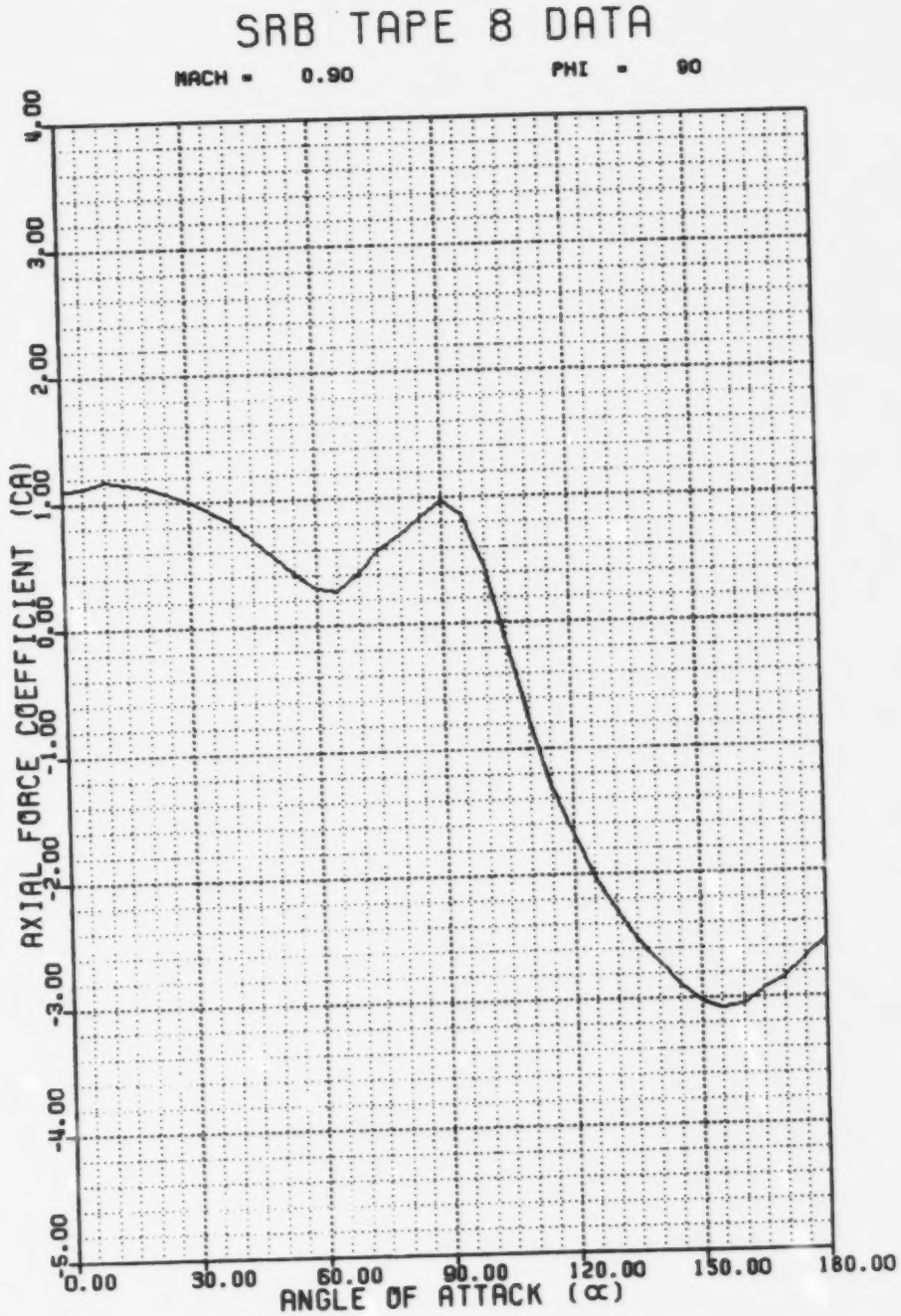
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 90
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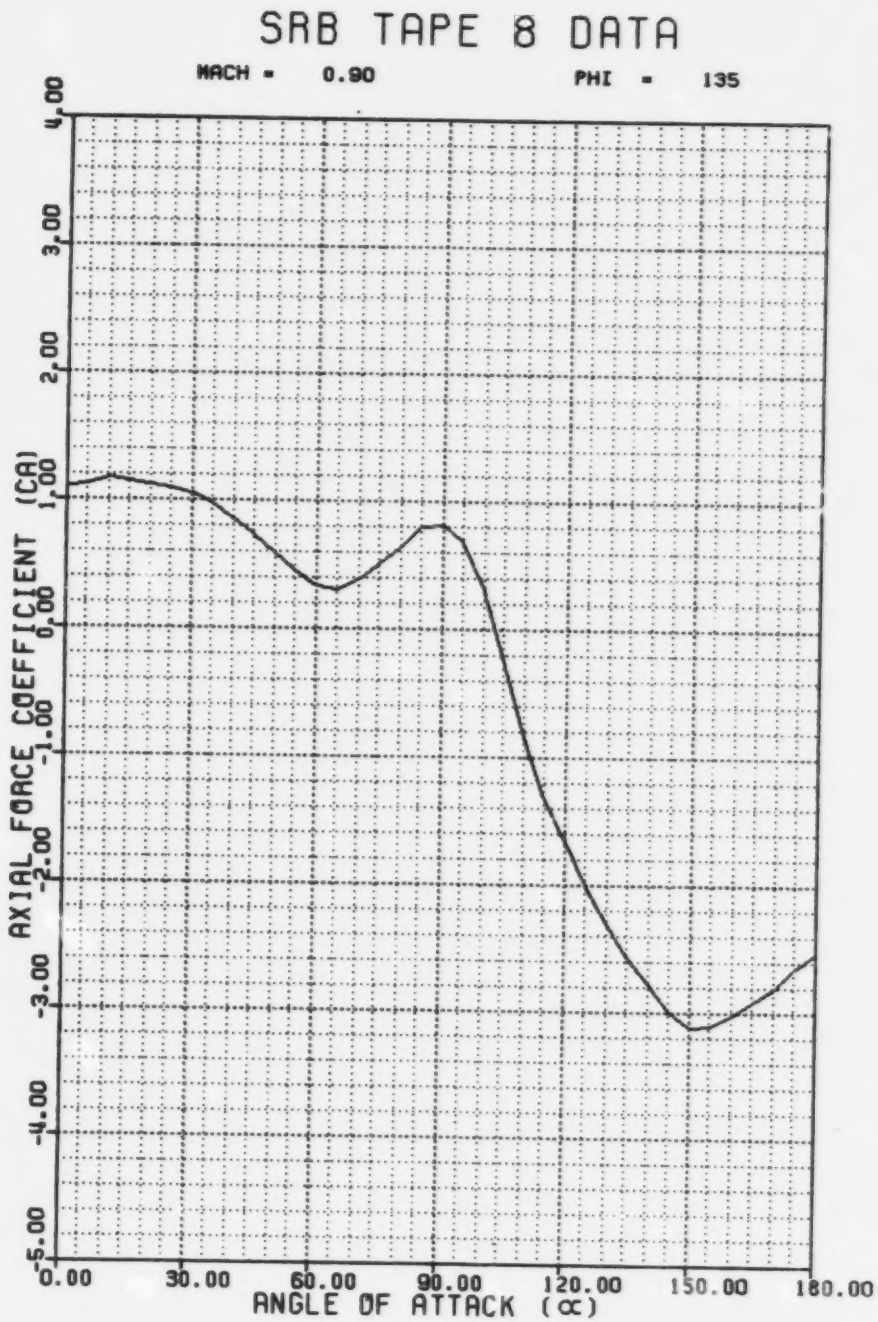
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 135
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2.00
1.00
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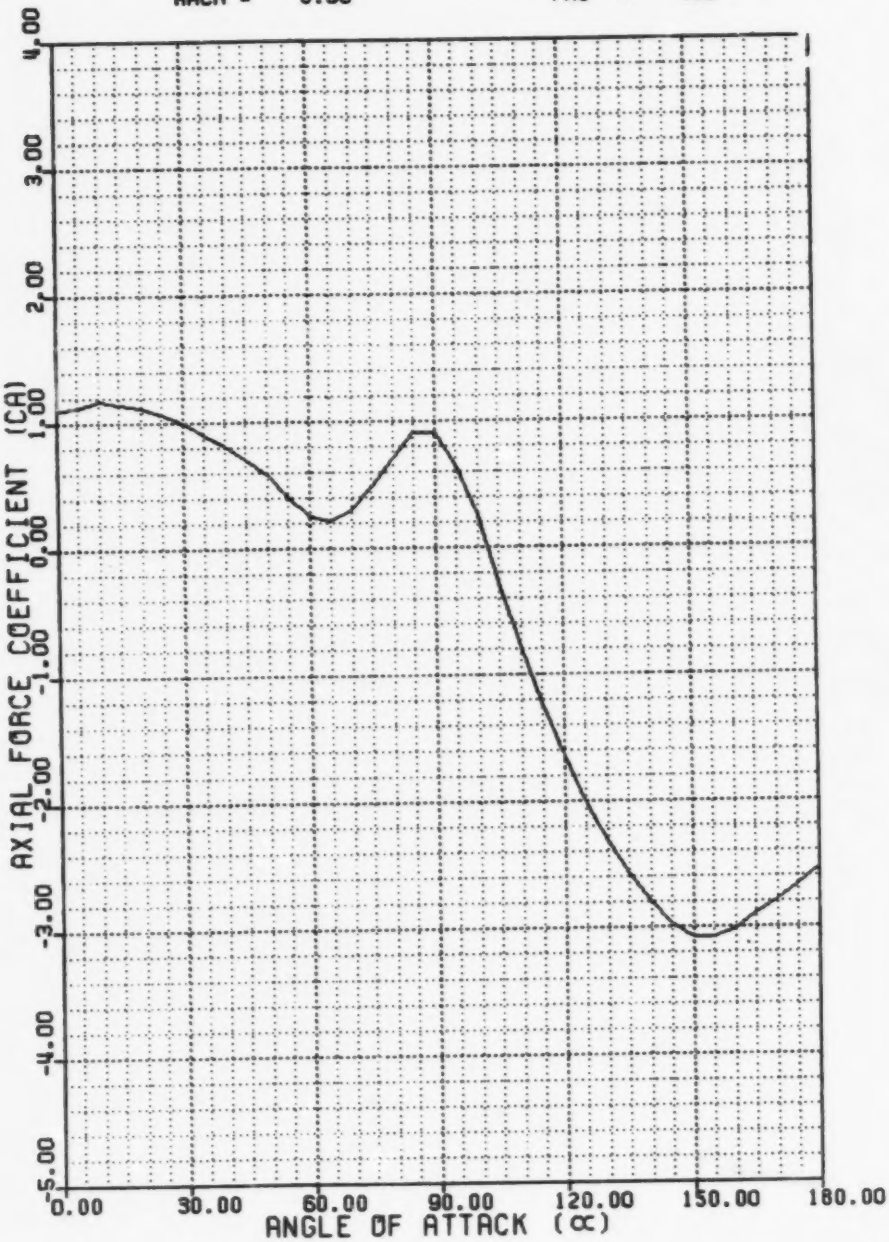
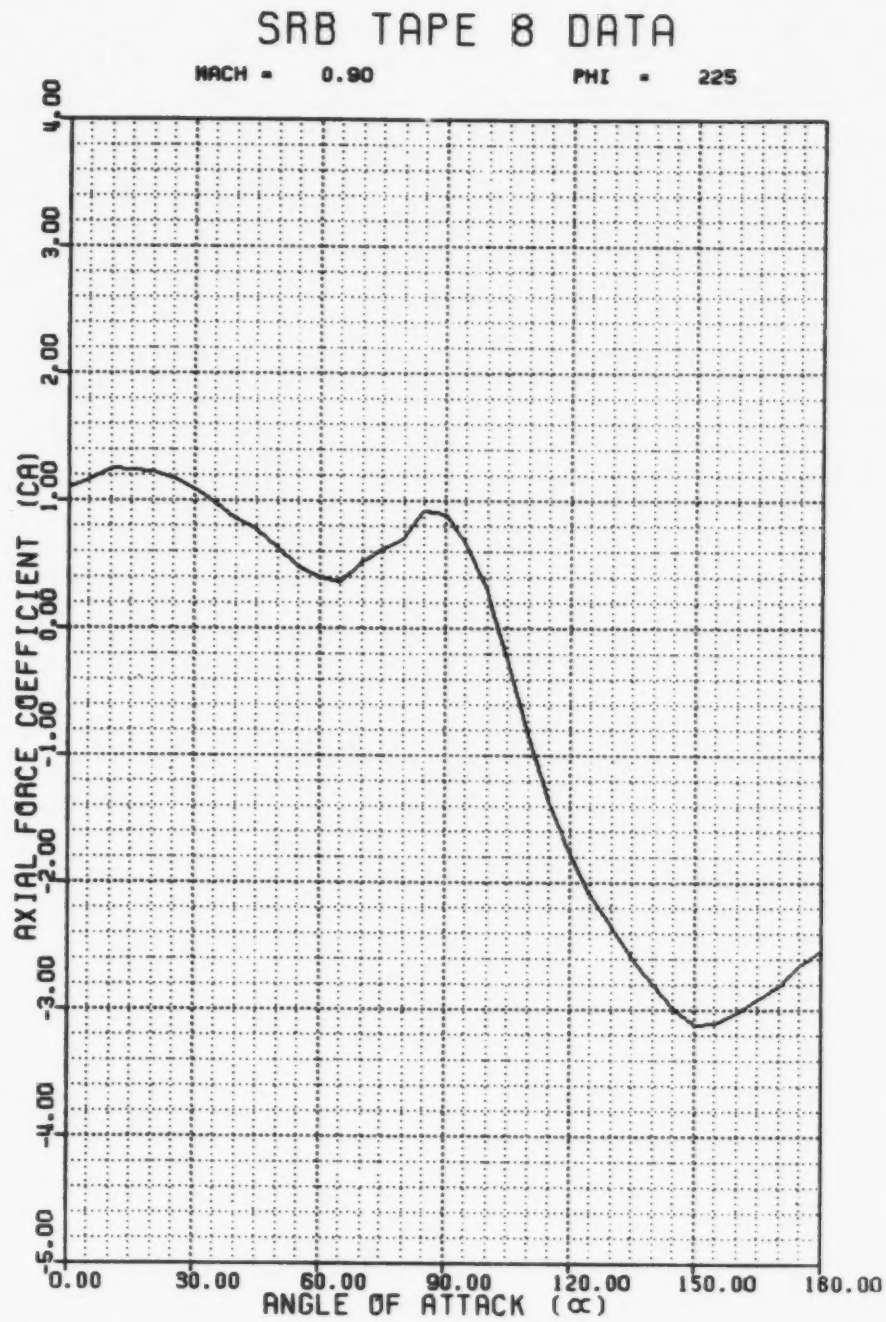
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.90 PHI = 180




SRB TAPE 8 DATA
MACH = 0.90
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
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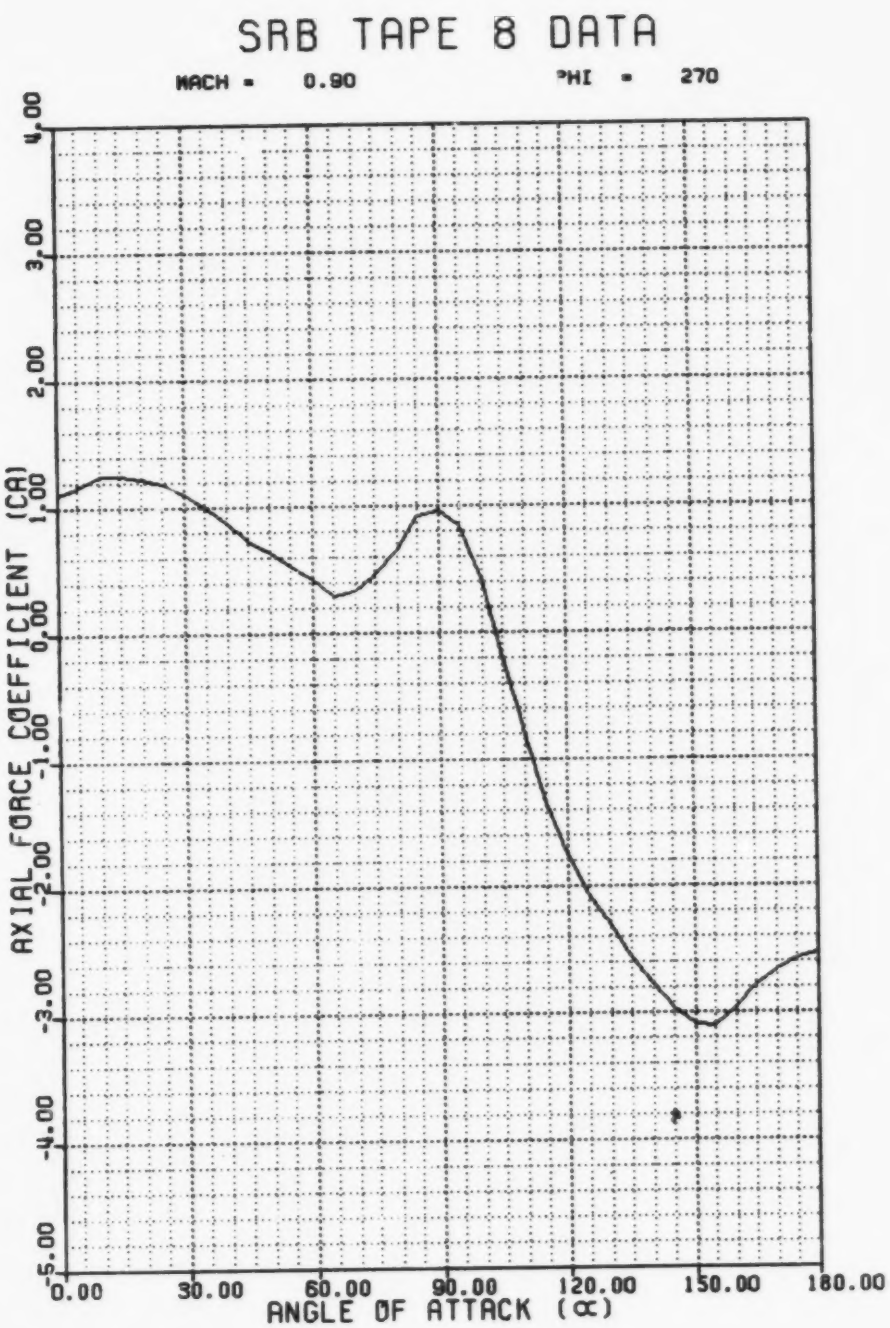
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
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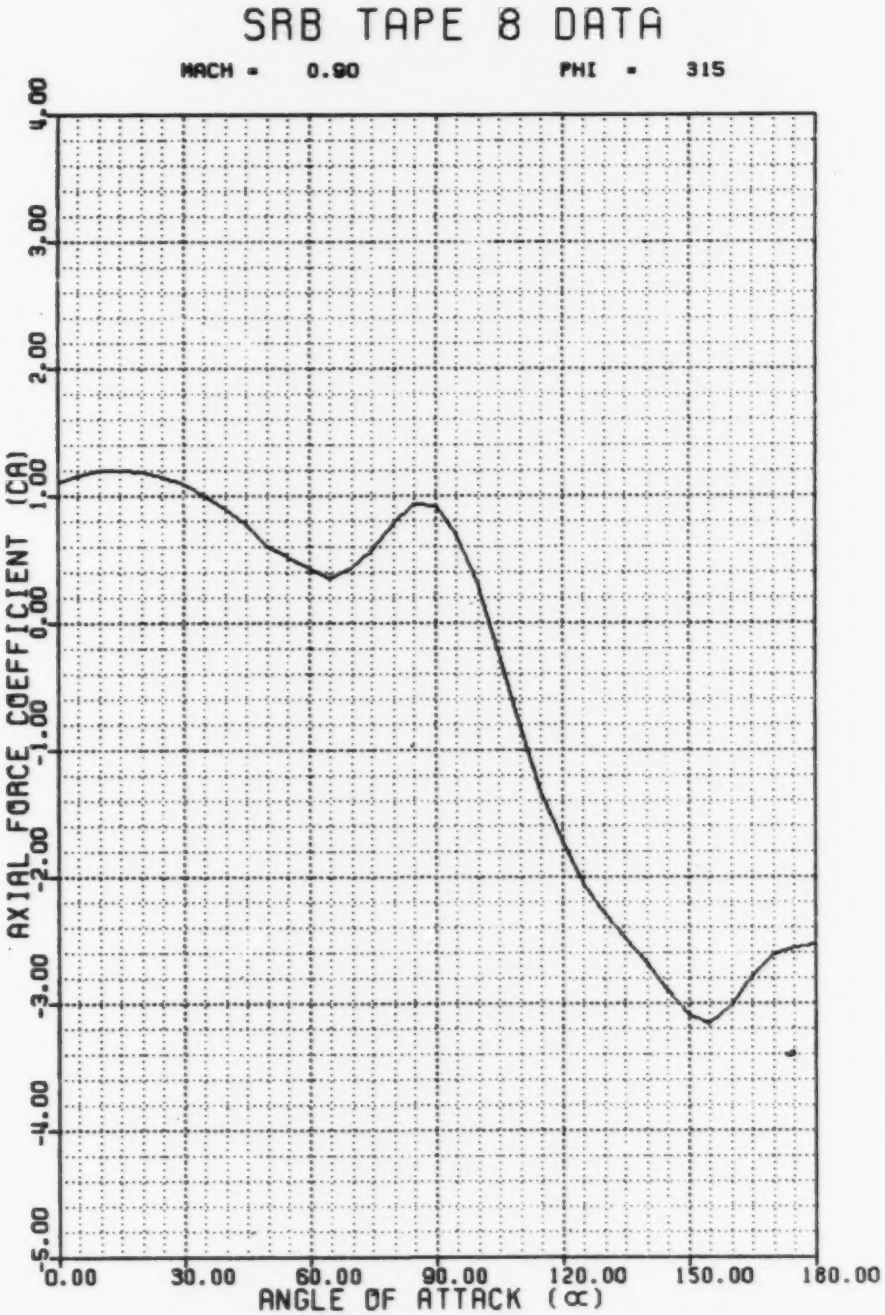
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
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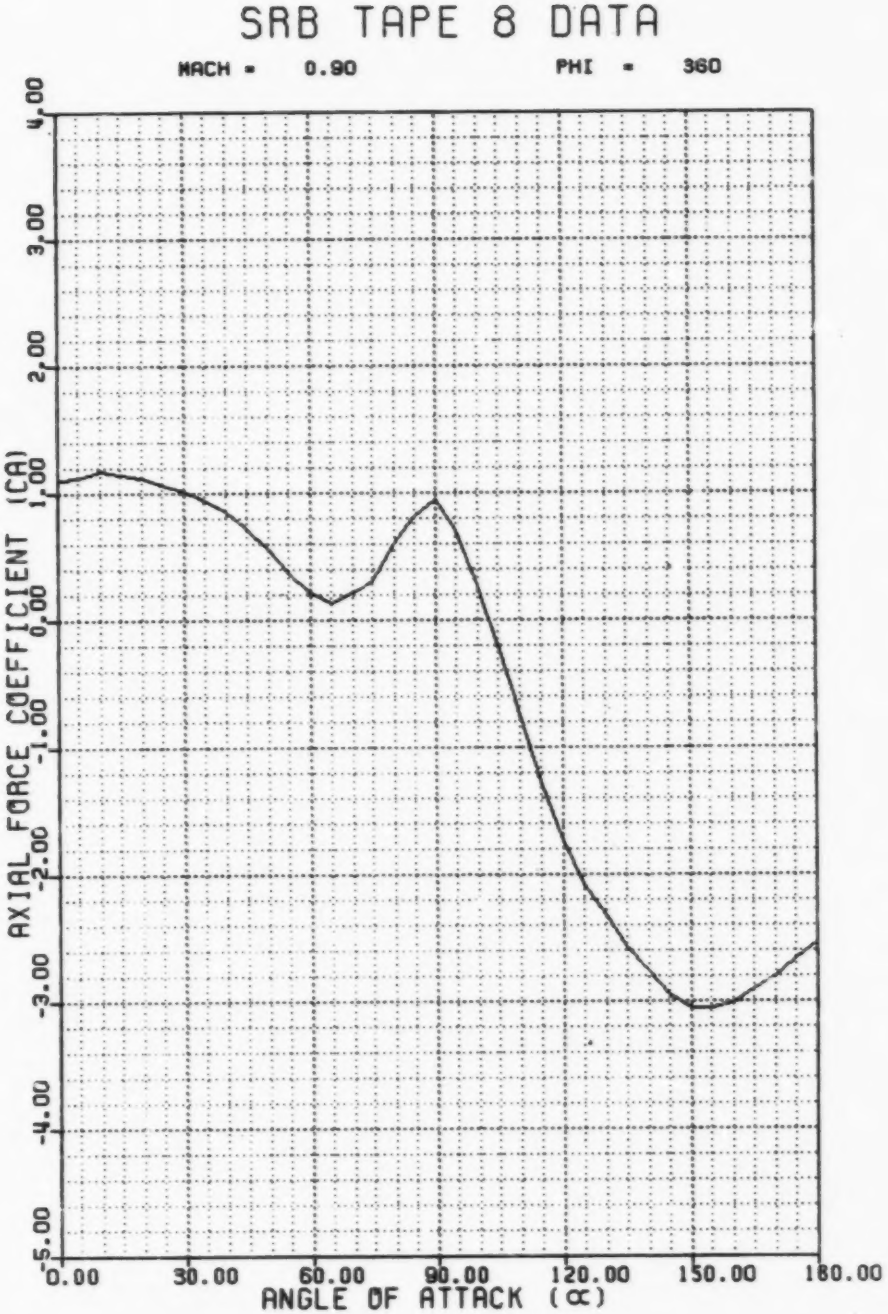
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
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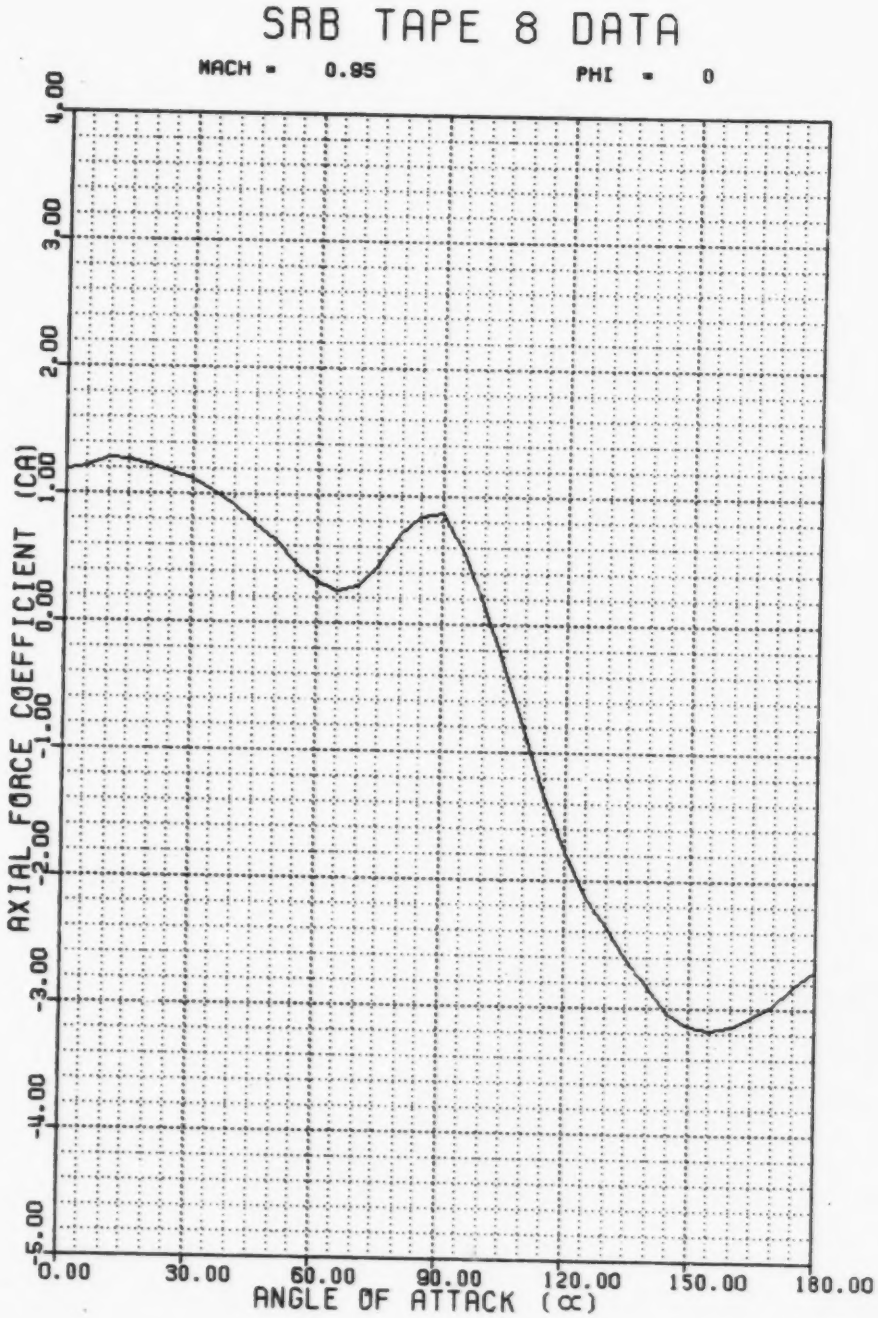
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-699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2.00
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-1.00
-2.00
-3.00
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0.00
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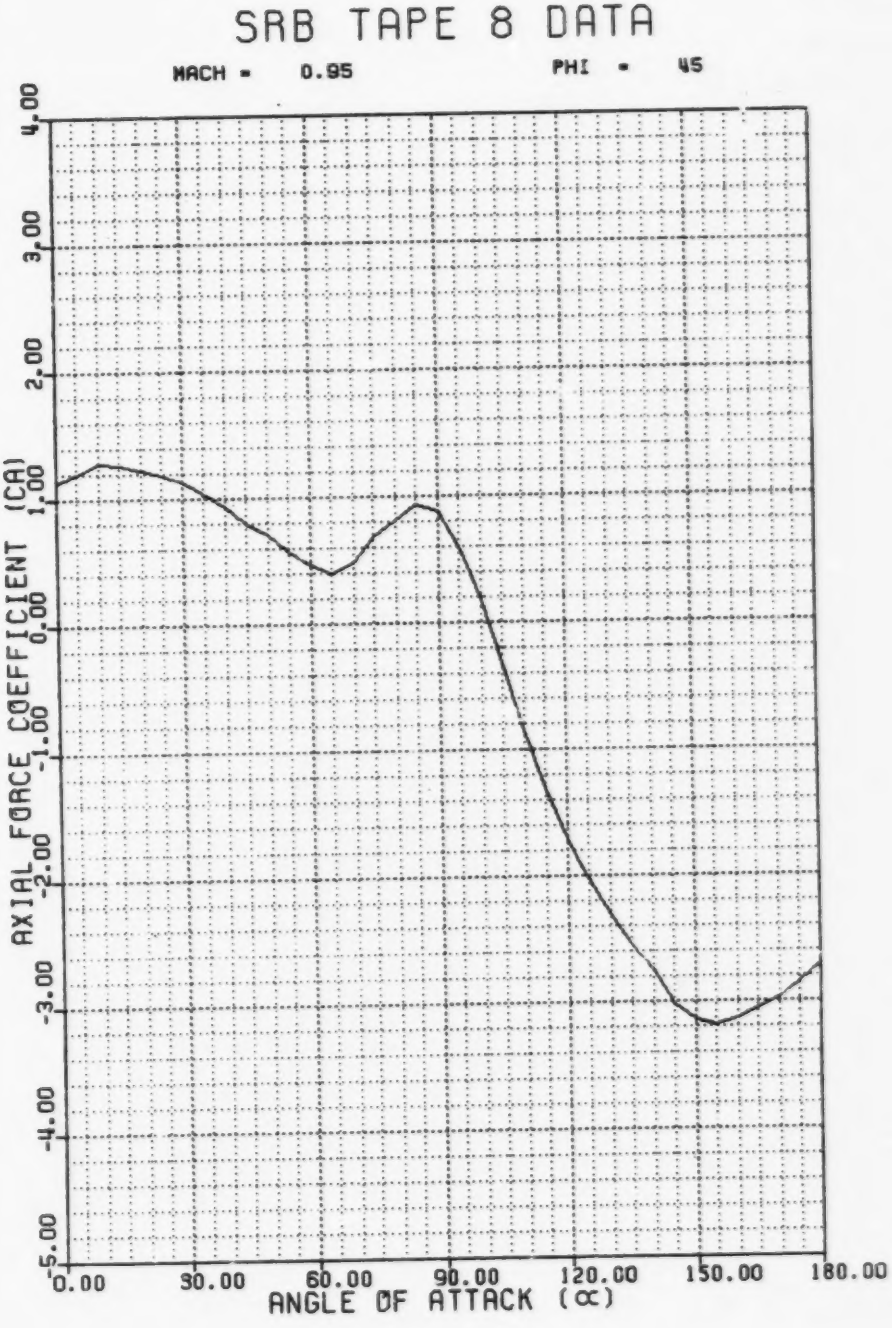
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.95
PHI = 45
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0.00
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-2.00
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-4.00
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0.00
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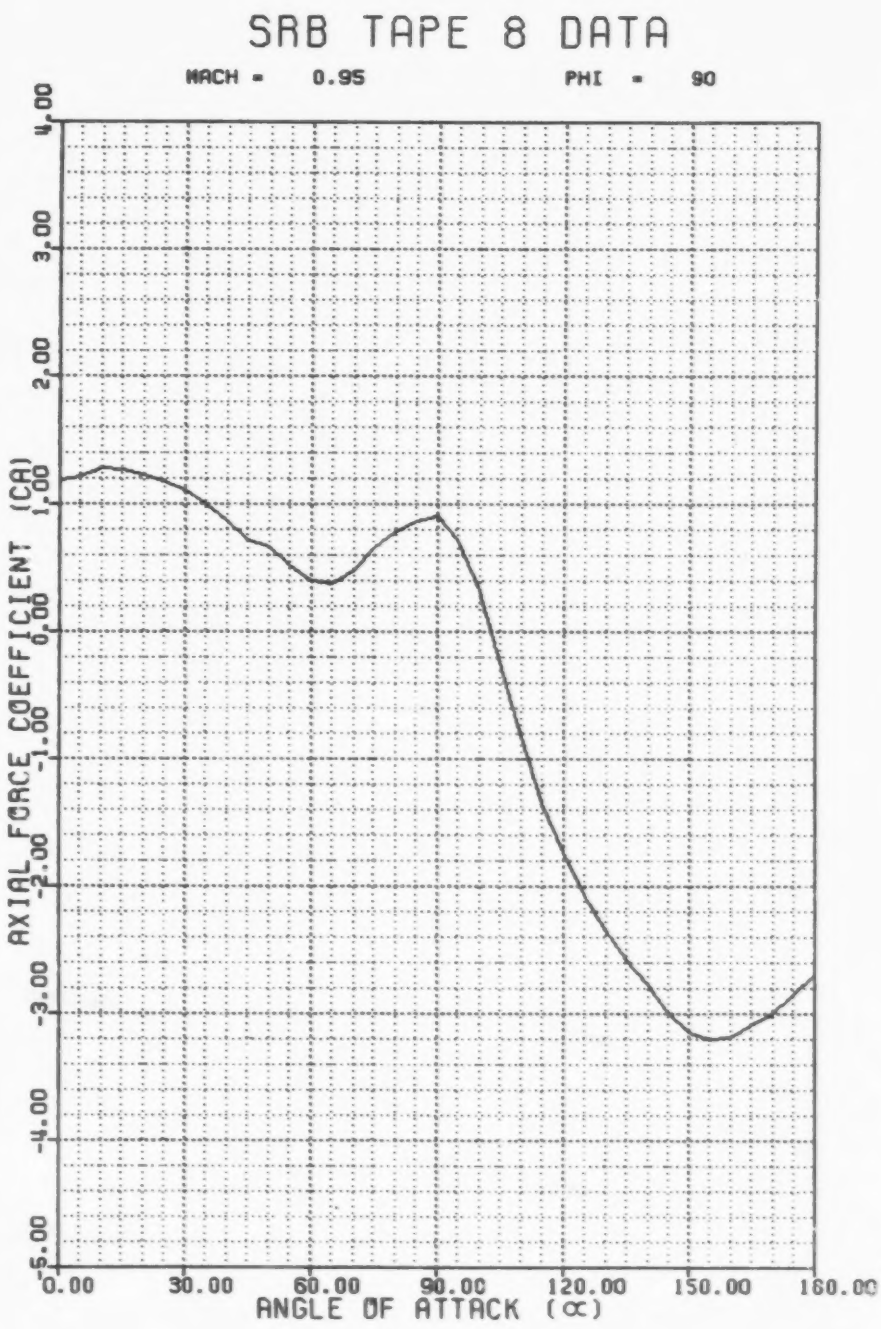
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 90
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1.00
0.00
-1.00
-2.00
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-4.00
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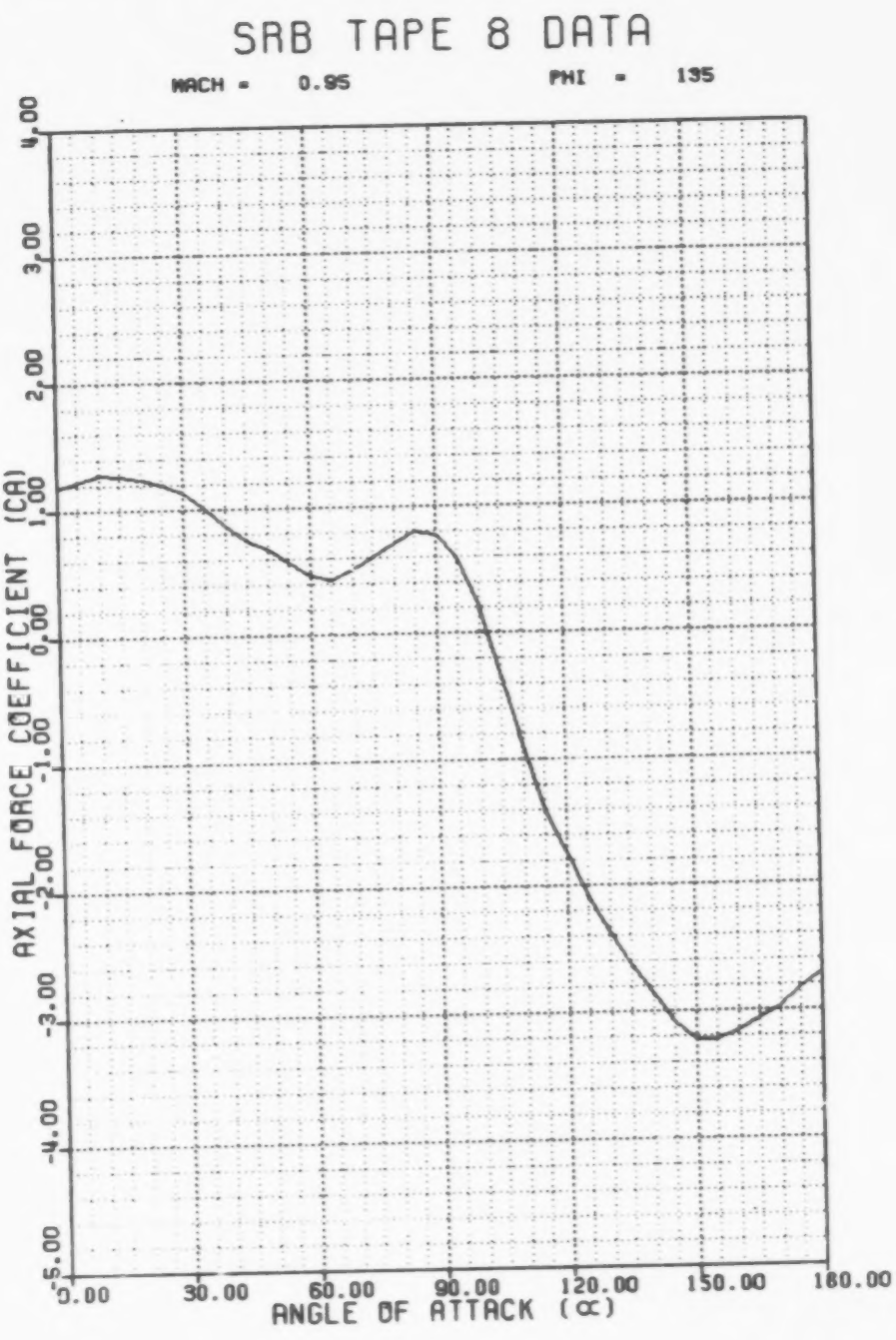
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
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-4.00
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0.00
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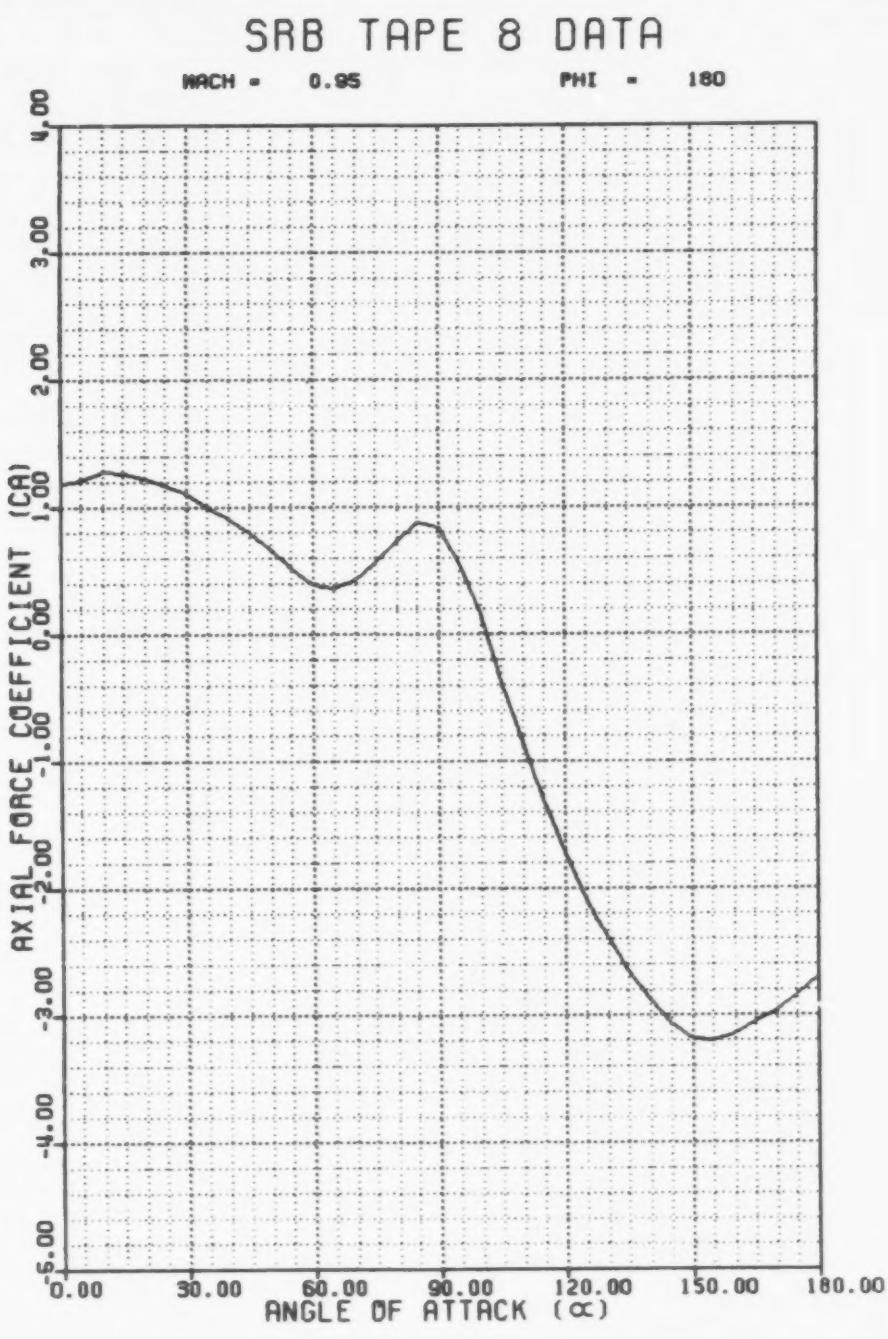
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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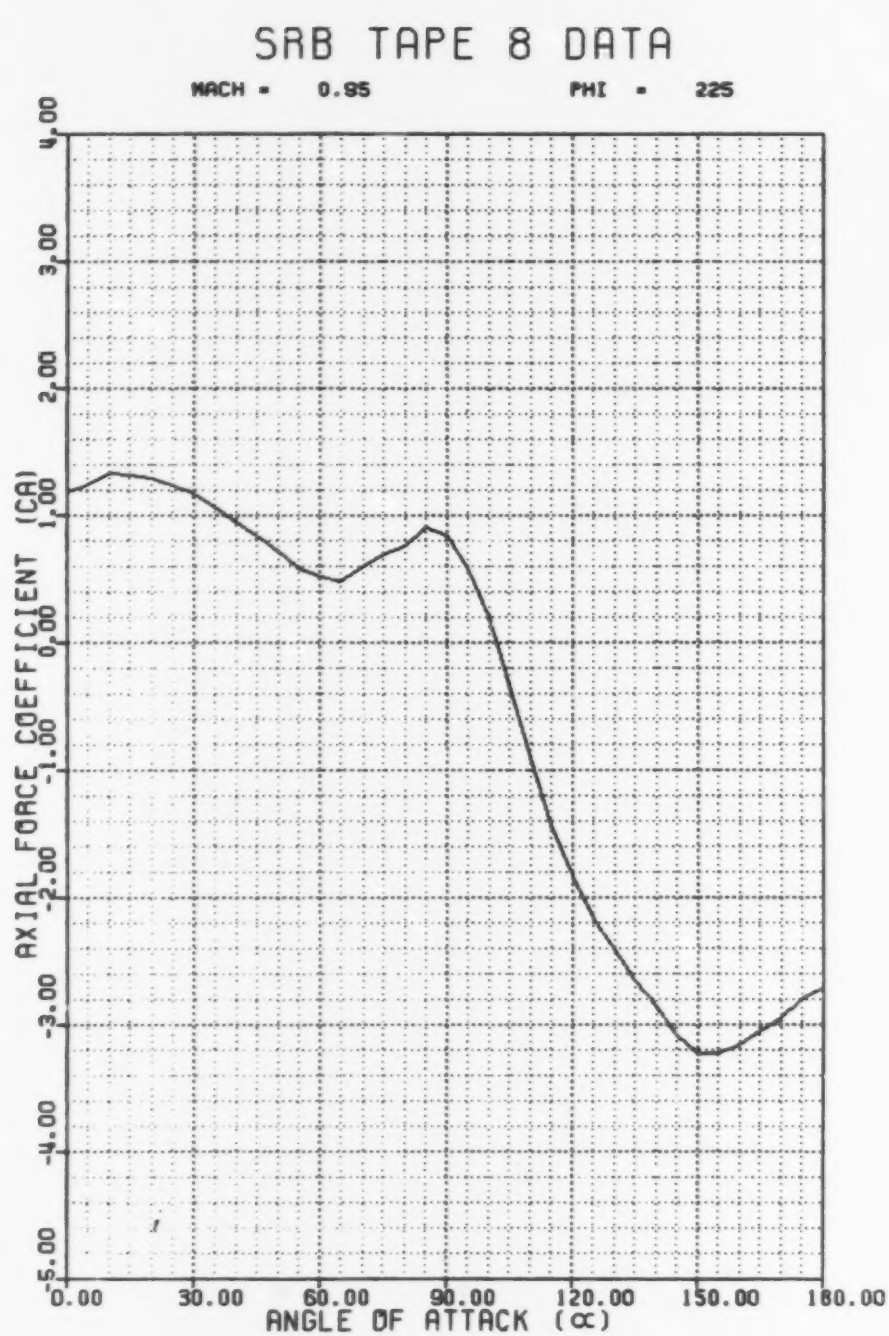
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-2.00
-3.00
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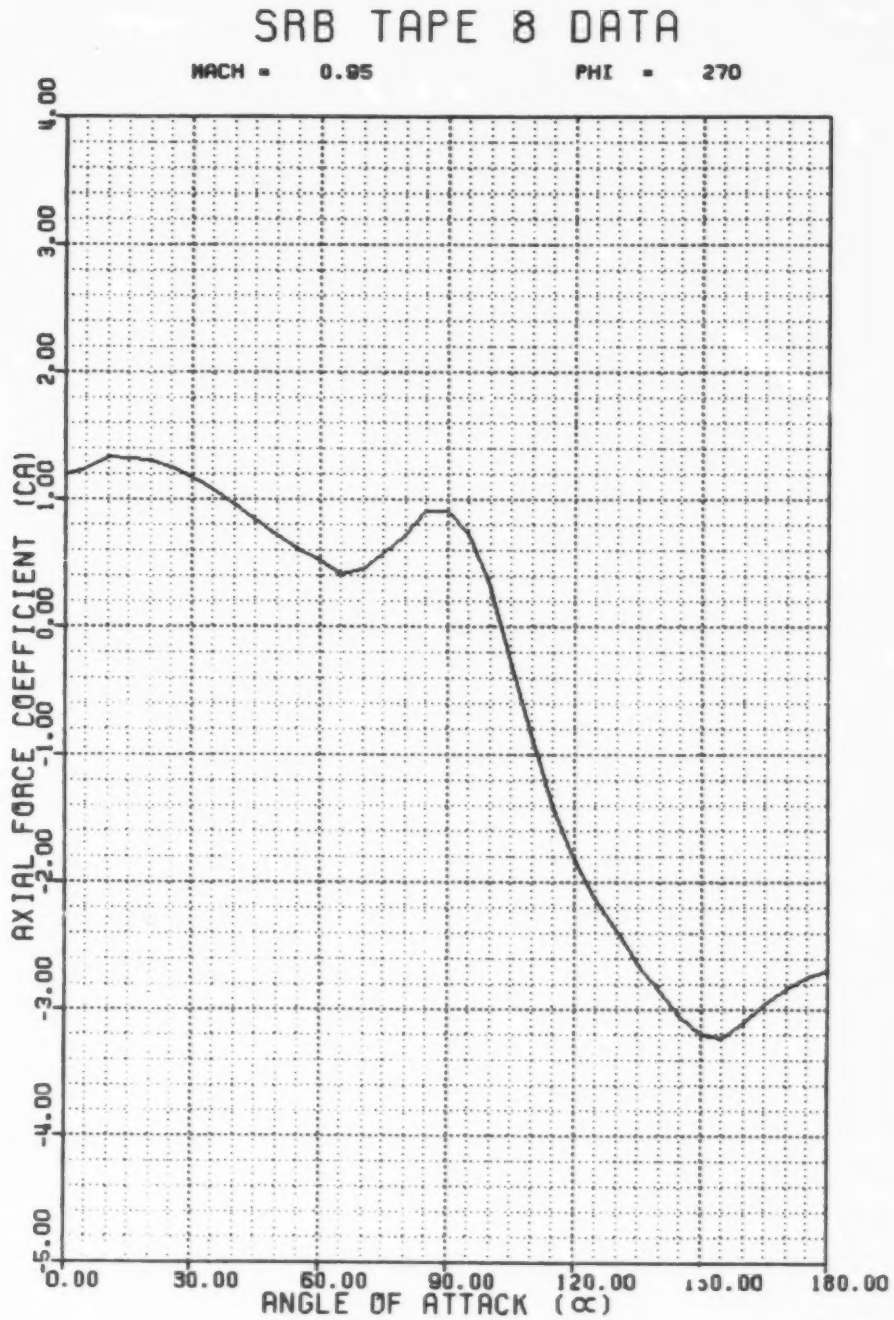
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.85
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2.00
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-1.00
-2.00
-3.00
-4.00
-5.00
0.00
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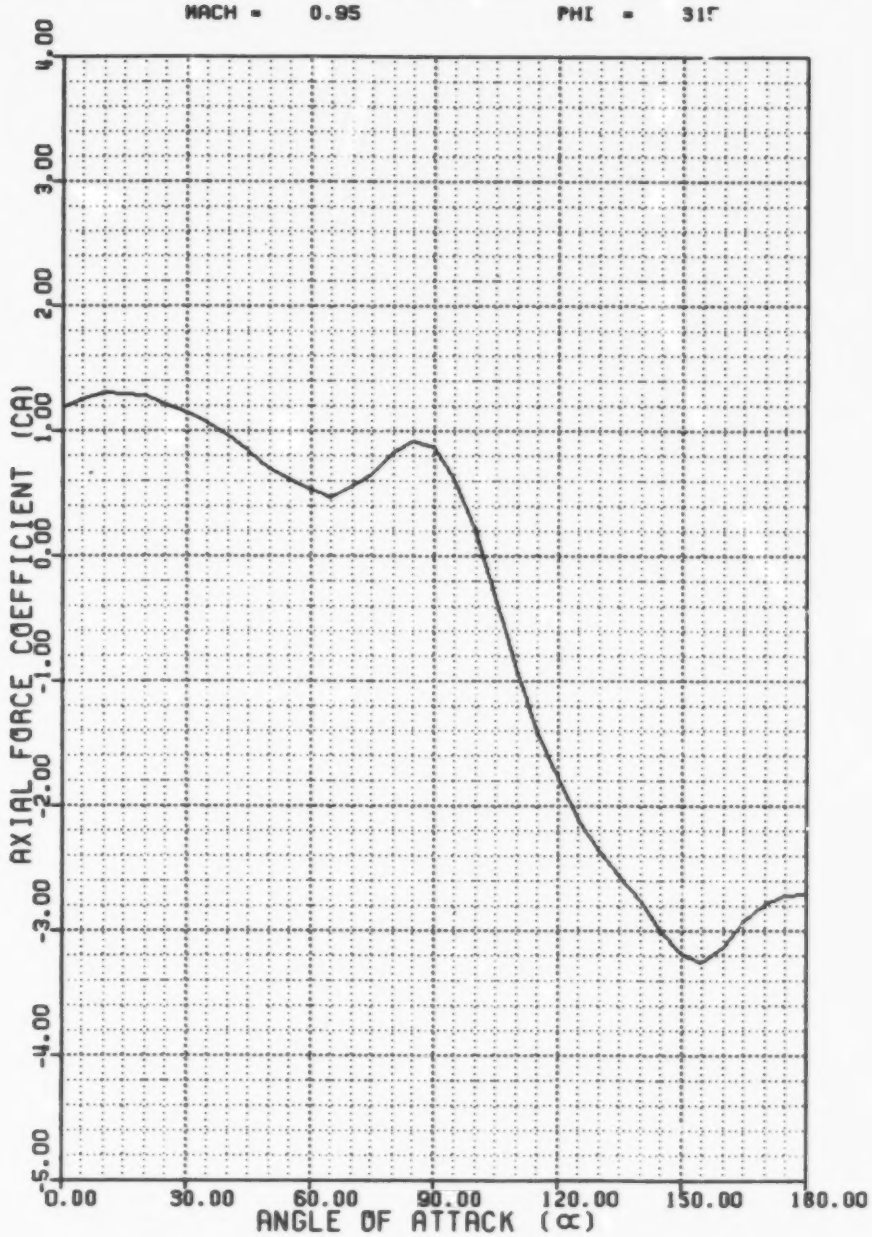
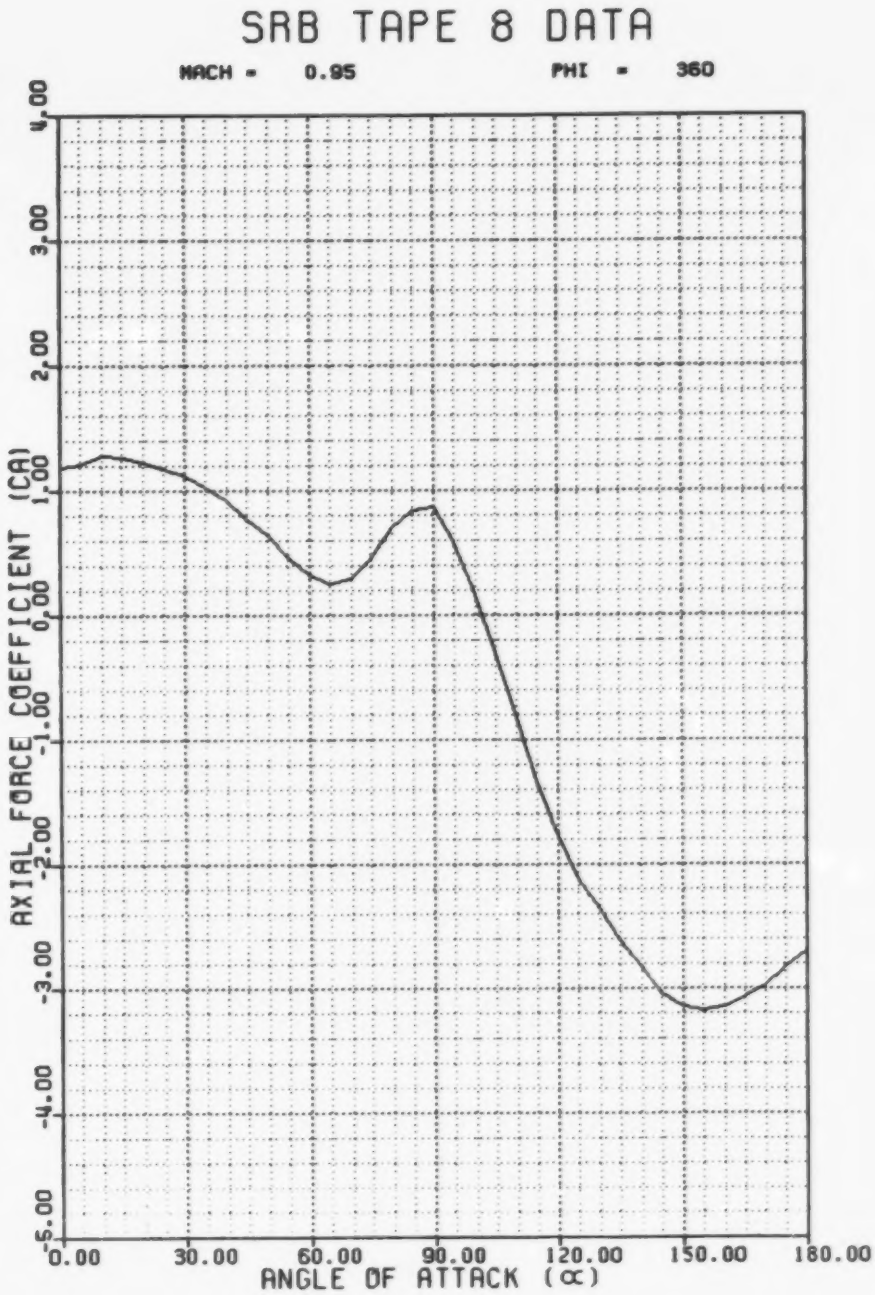
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.95 PHI = 315




SRB TAPE 8 DATA
MACH = 0.95
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
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3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
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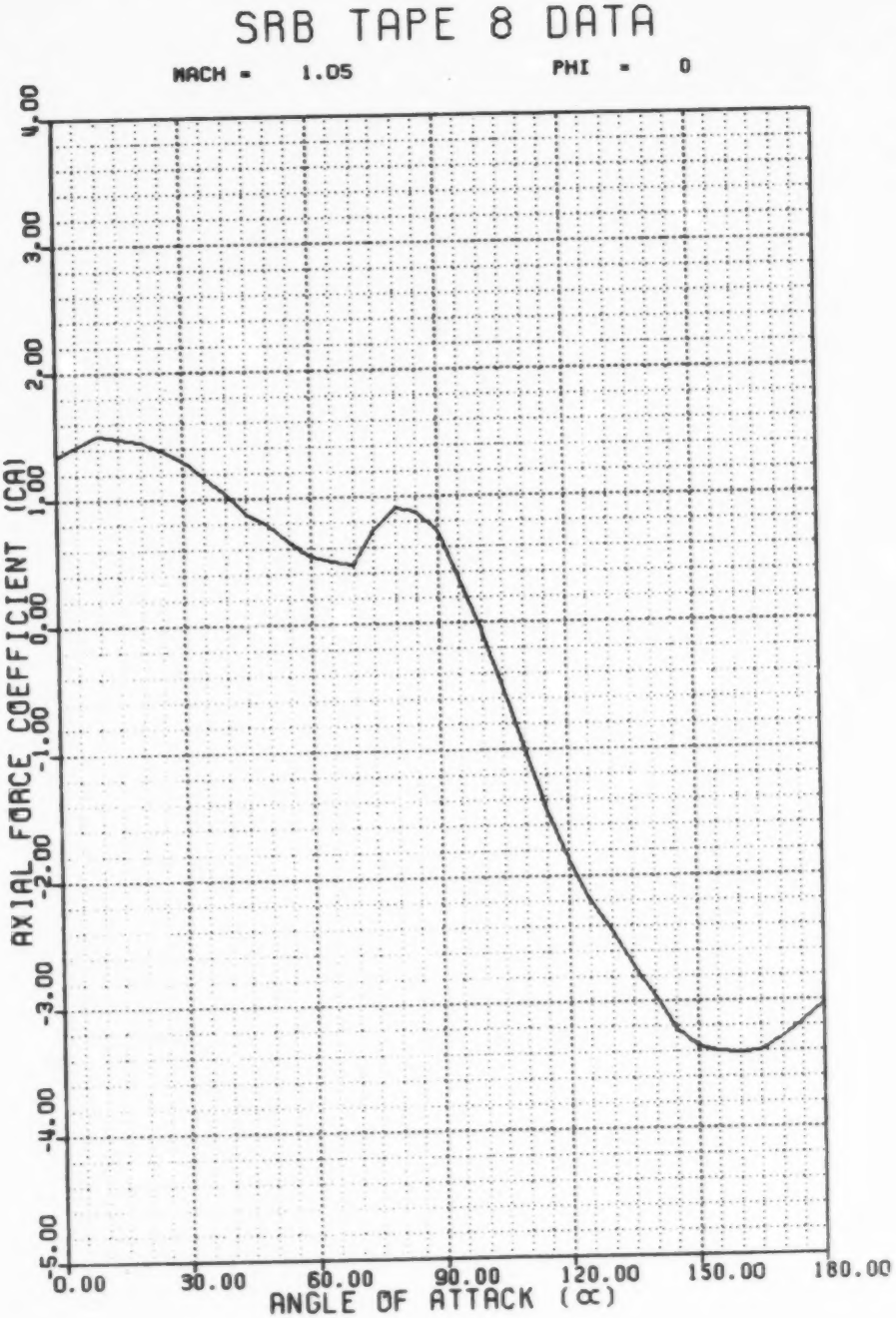
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 0
AXIAL FORCE COEFFICIENT (CA)
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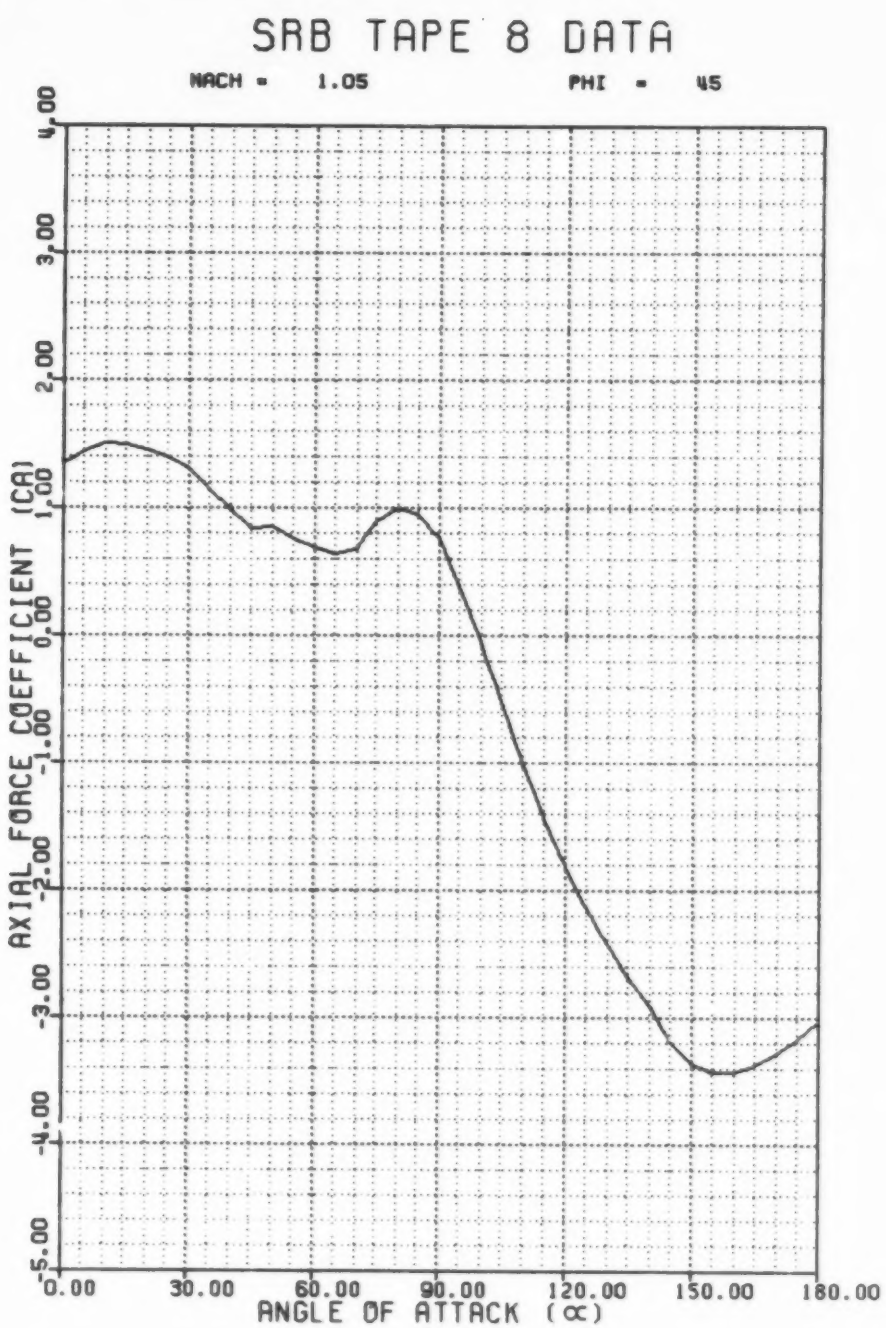
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
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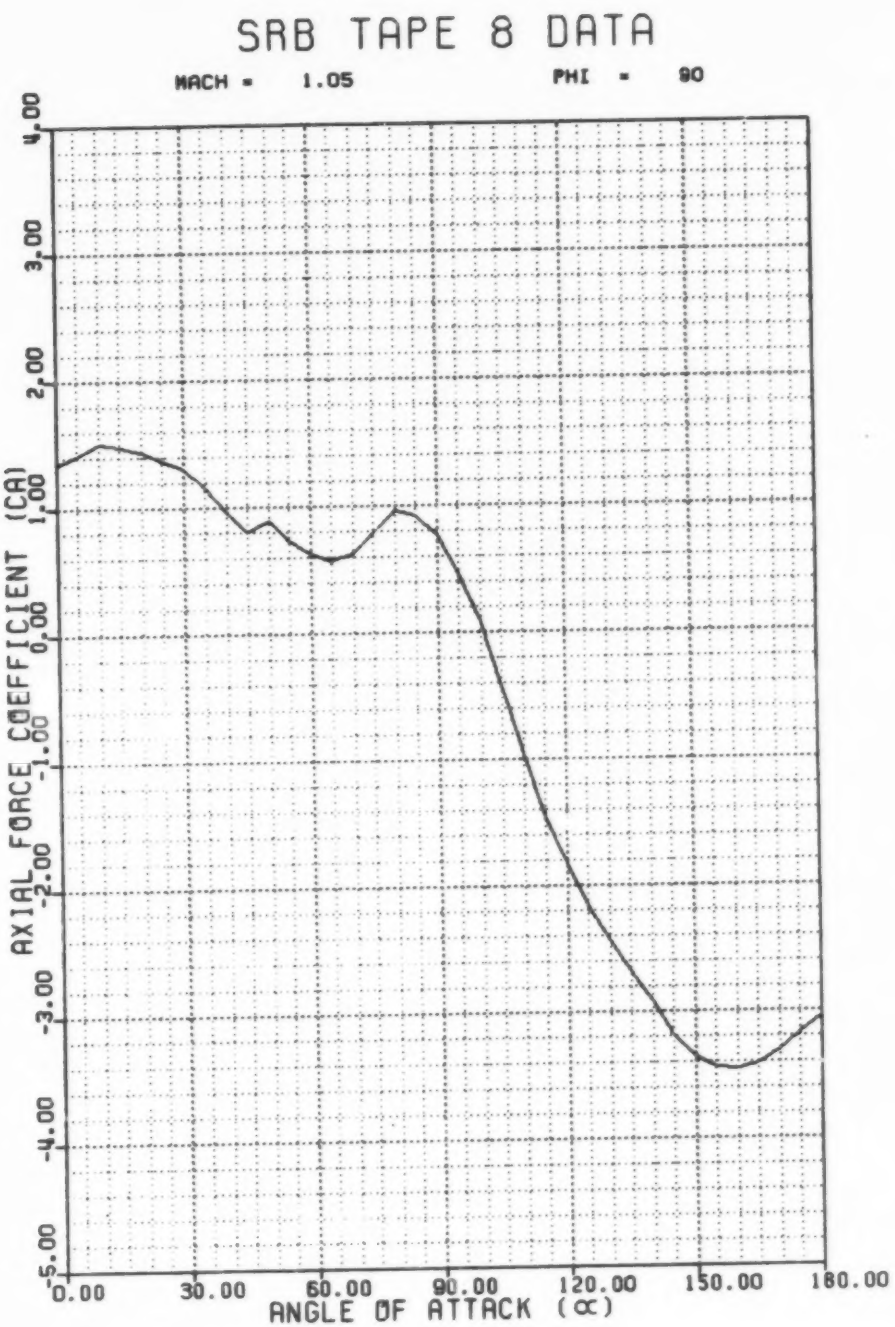
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
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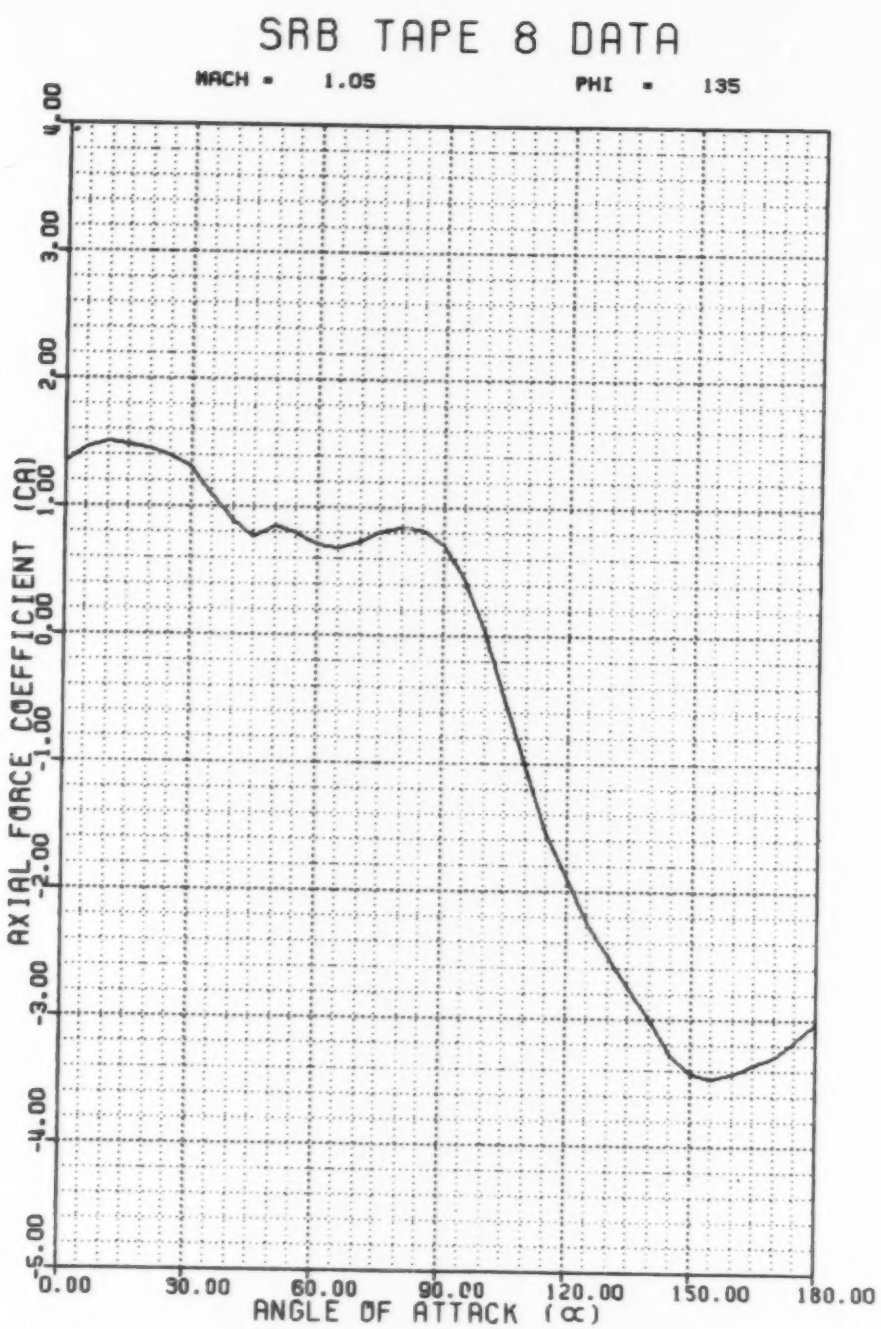
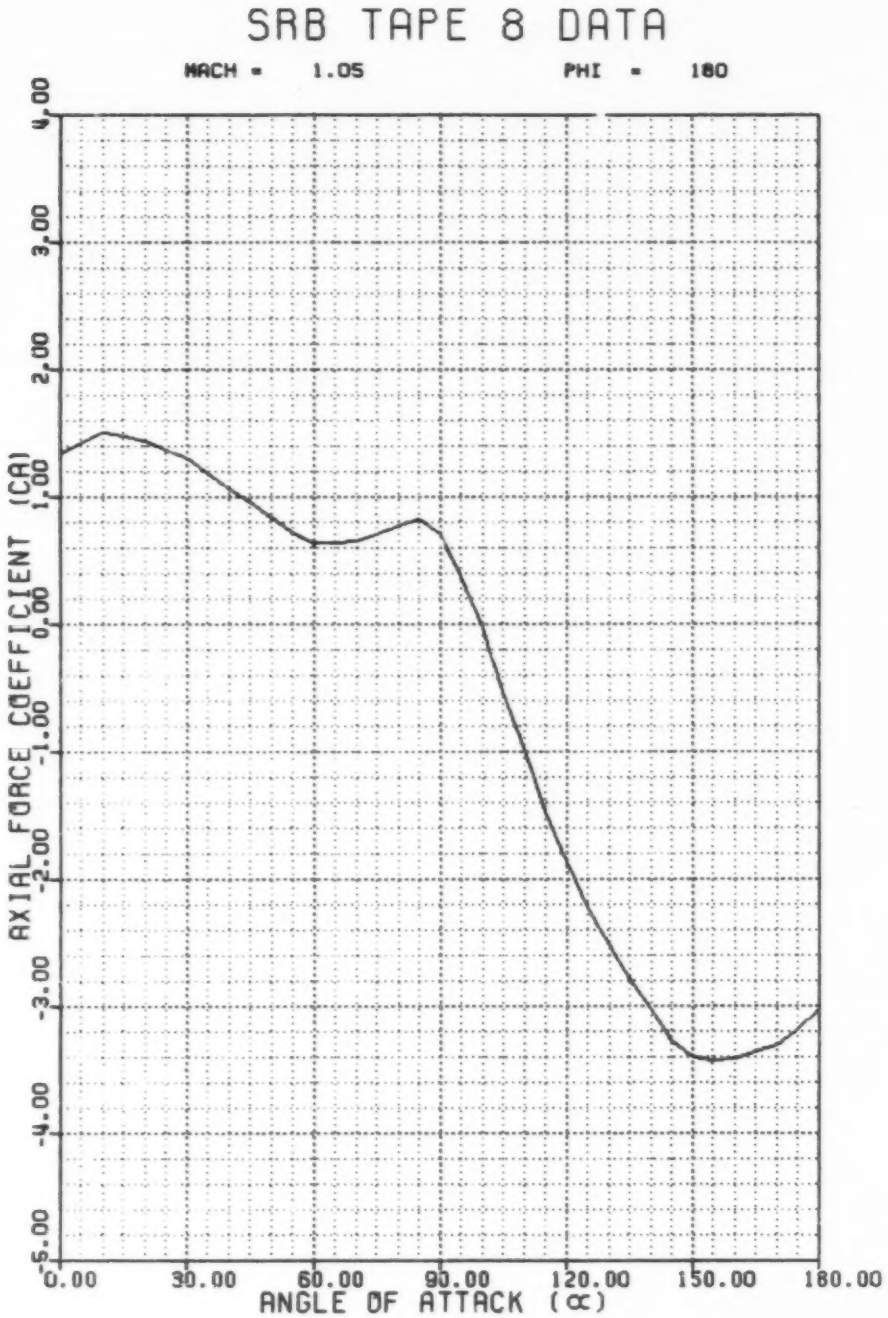
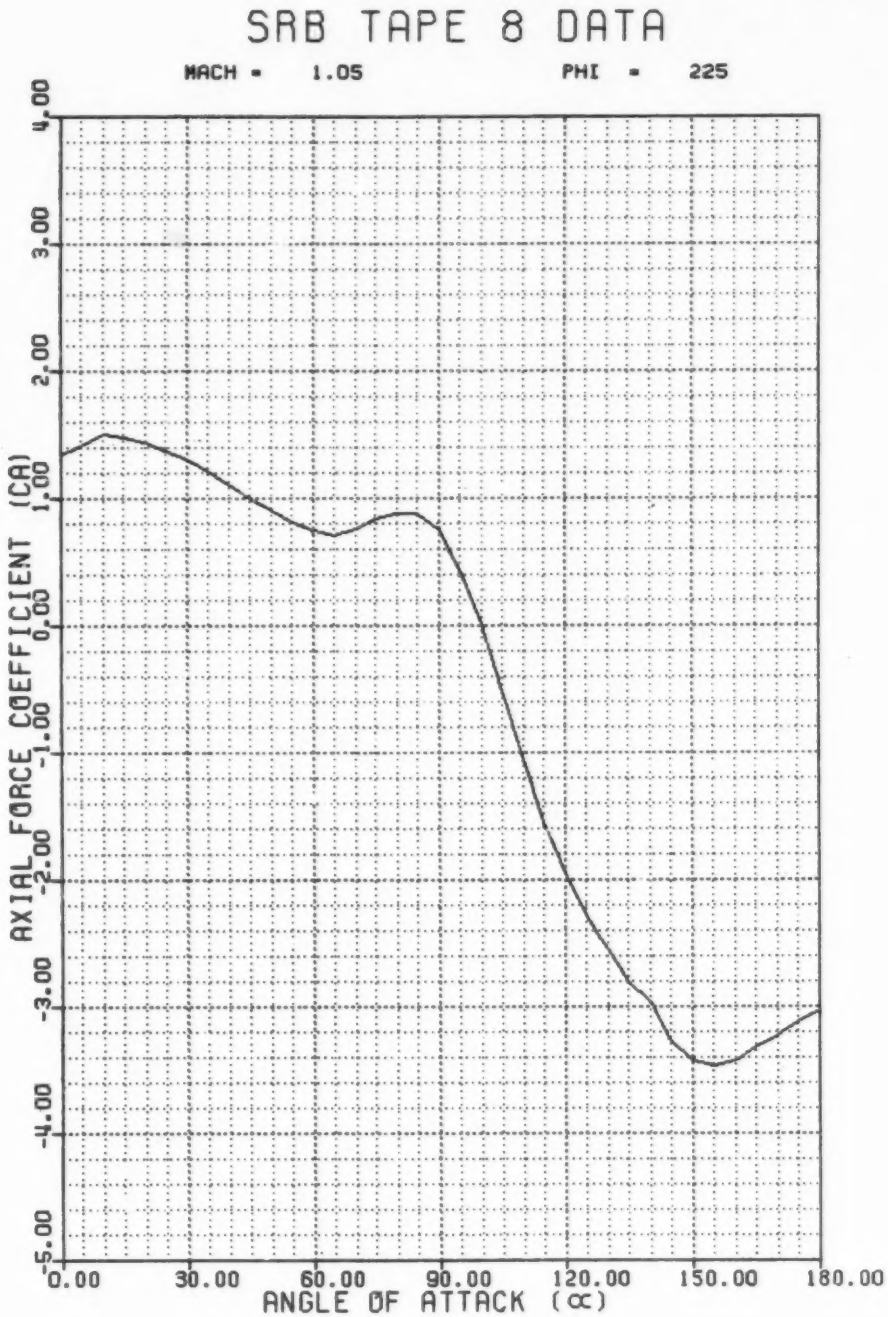
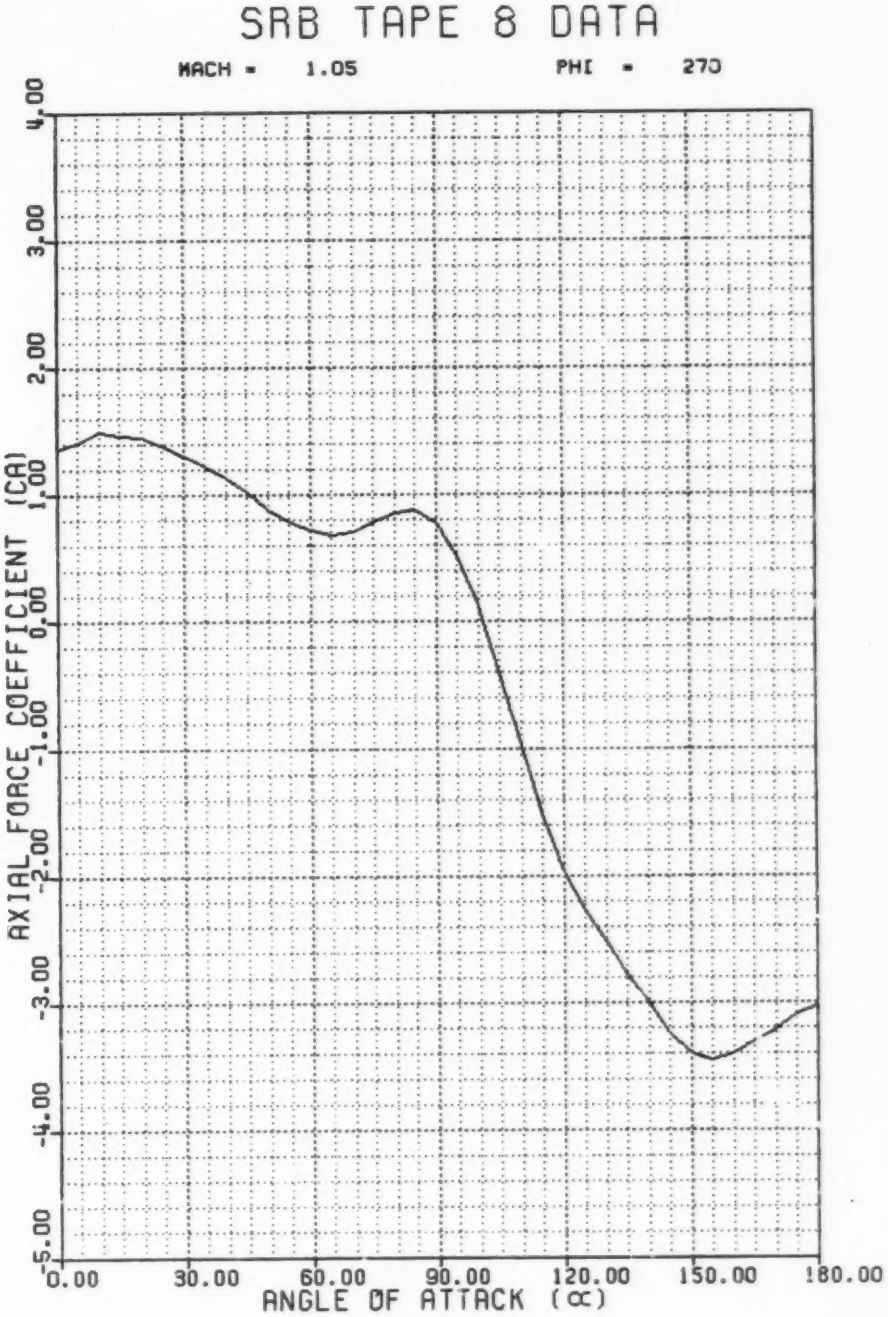
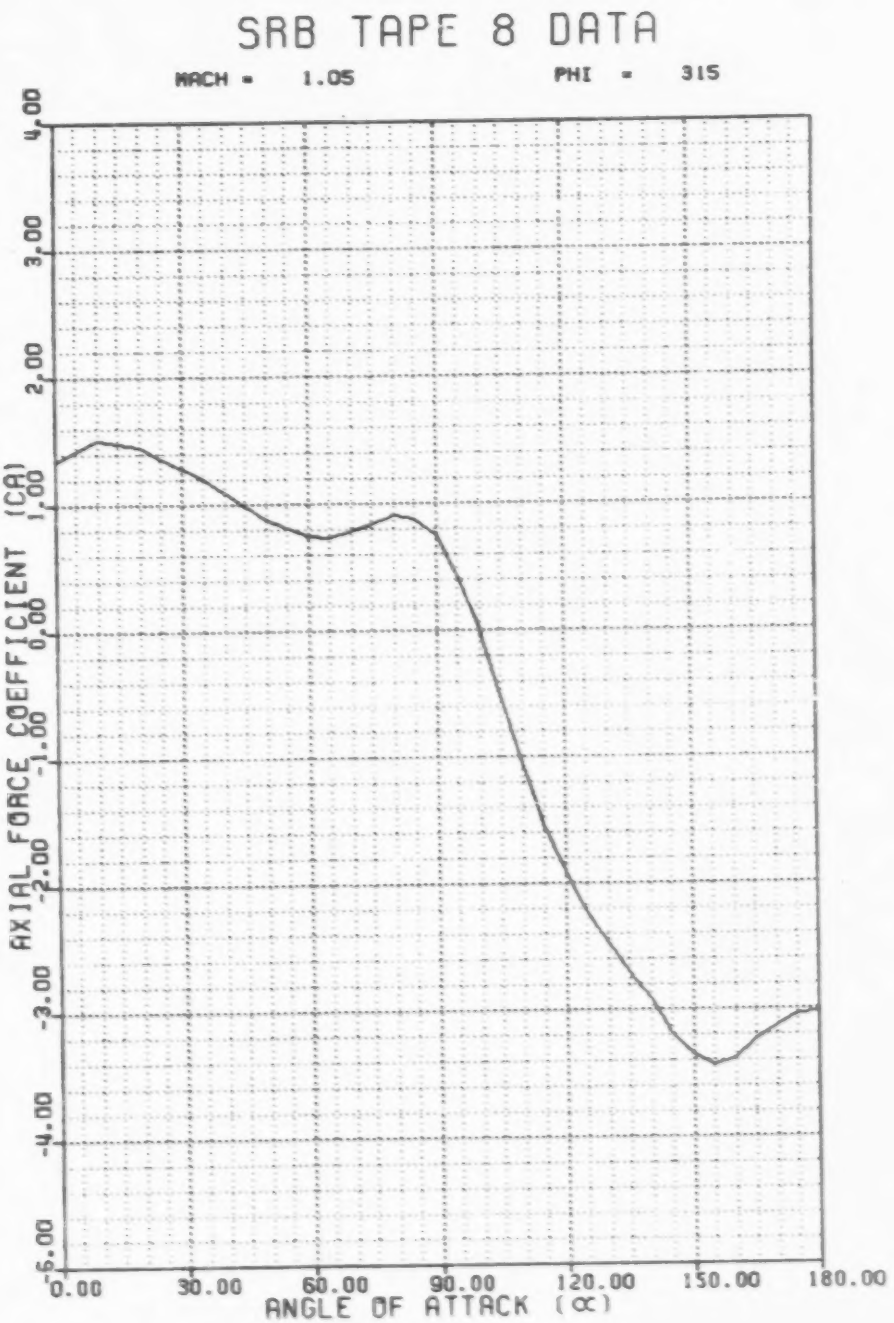
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

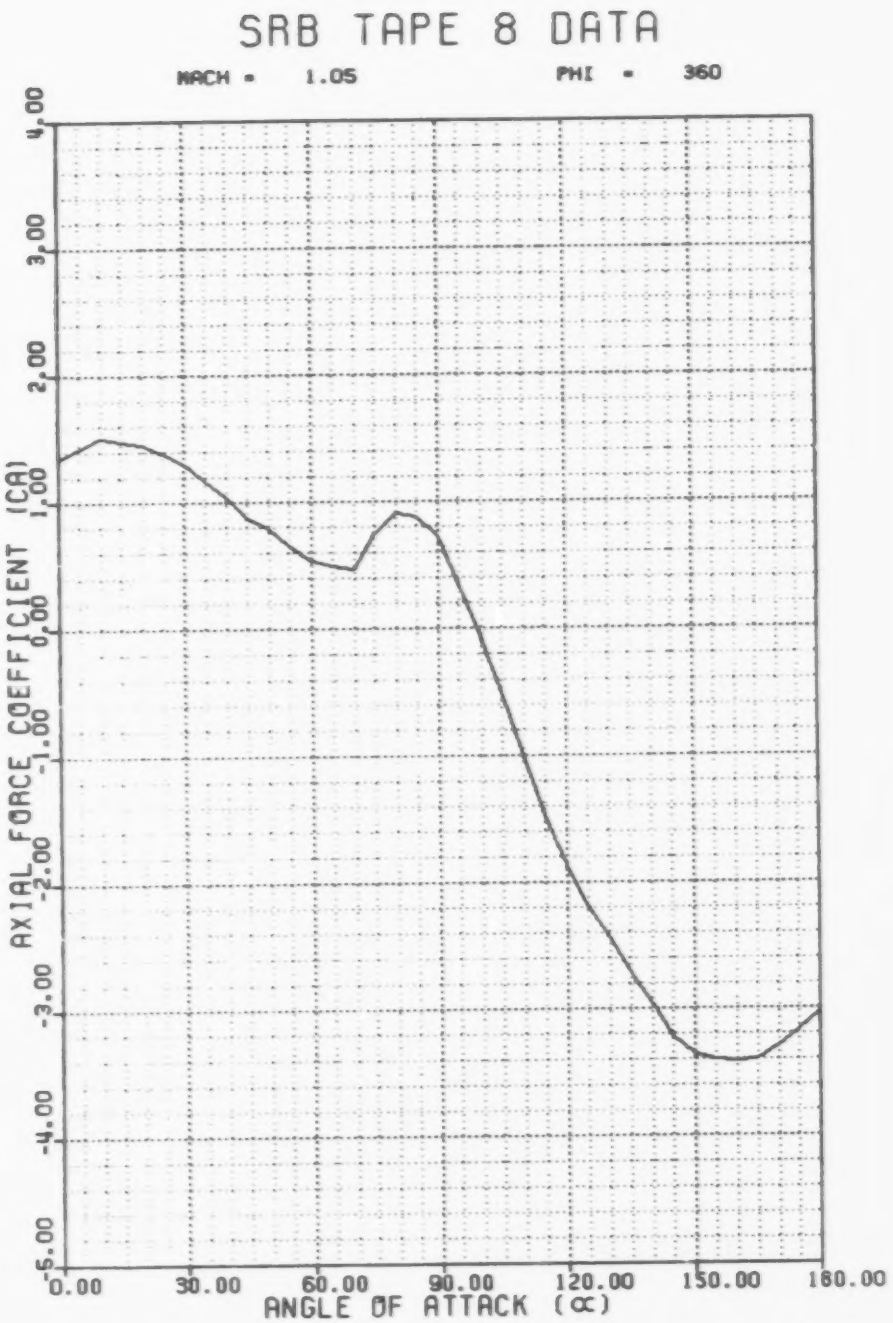

SRB TAPE 8 DATA
MACH = 1.05
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

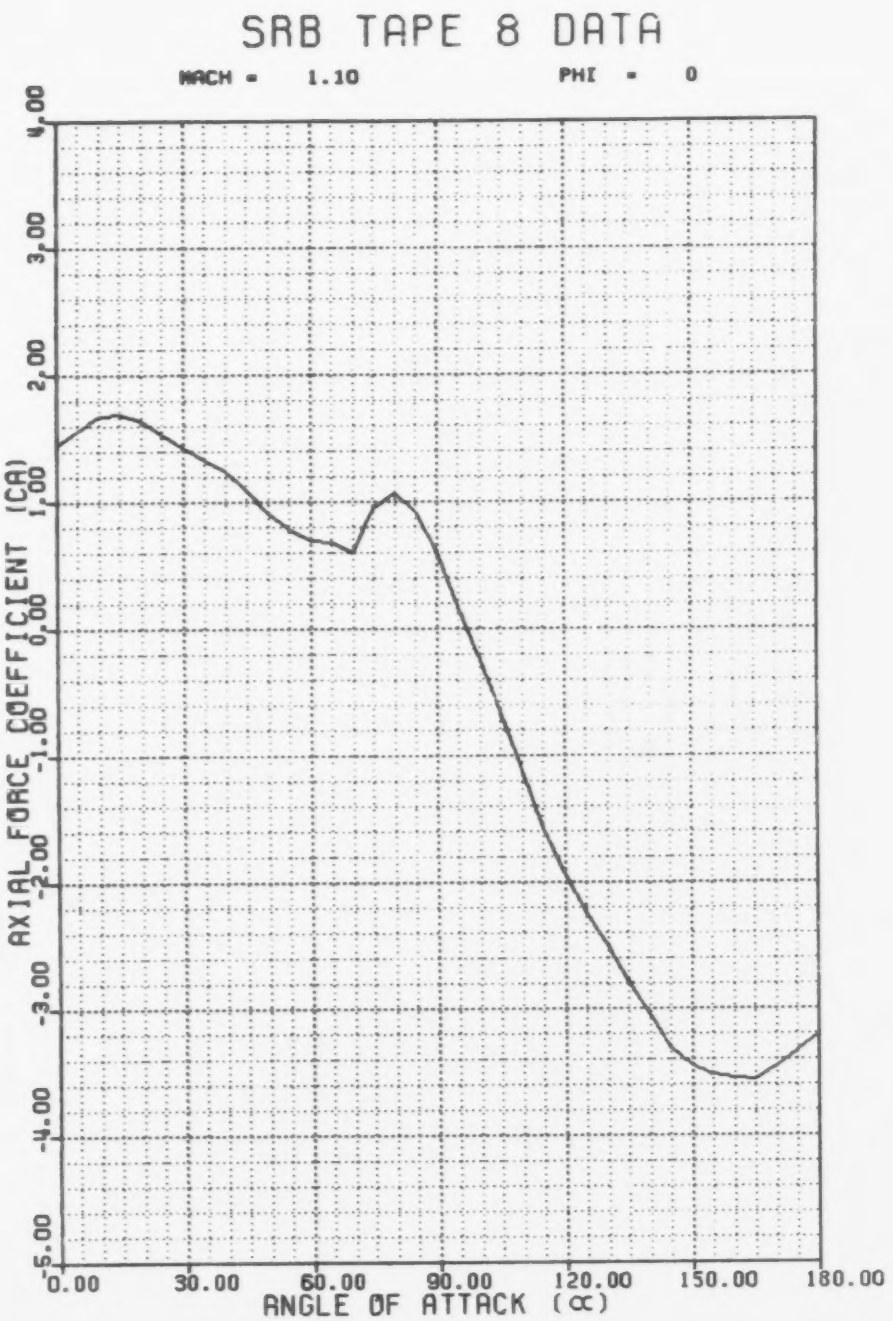

SRB TAPE 8 DATA
MACH = 1.05
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

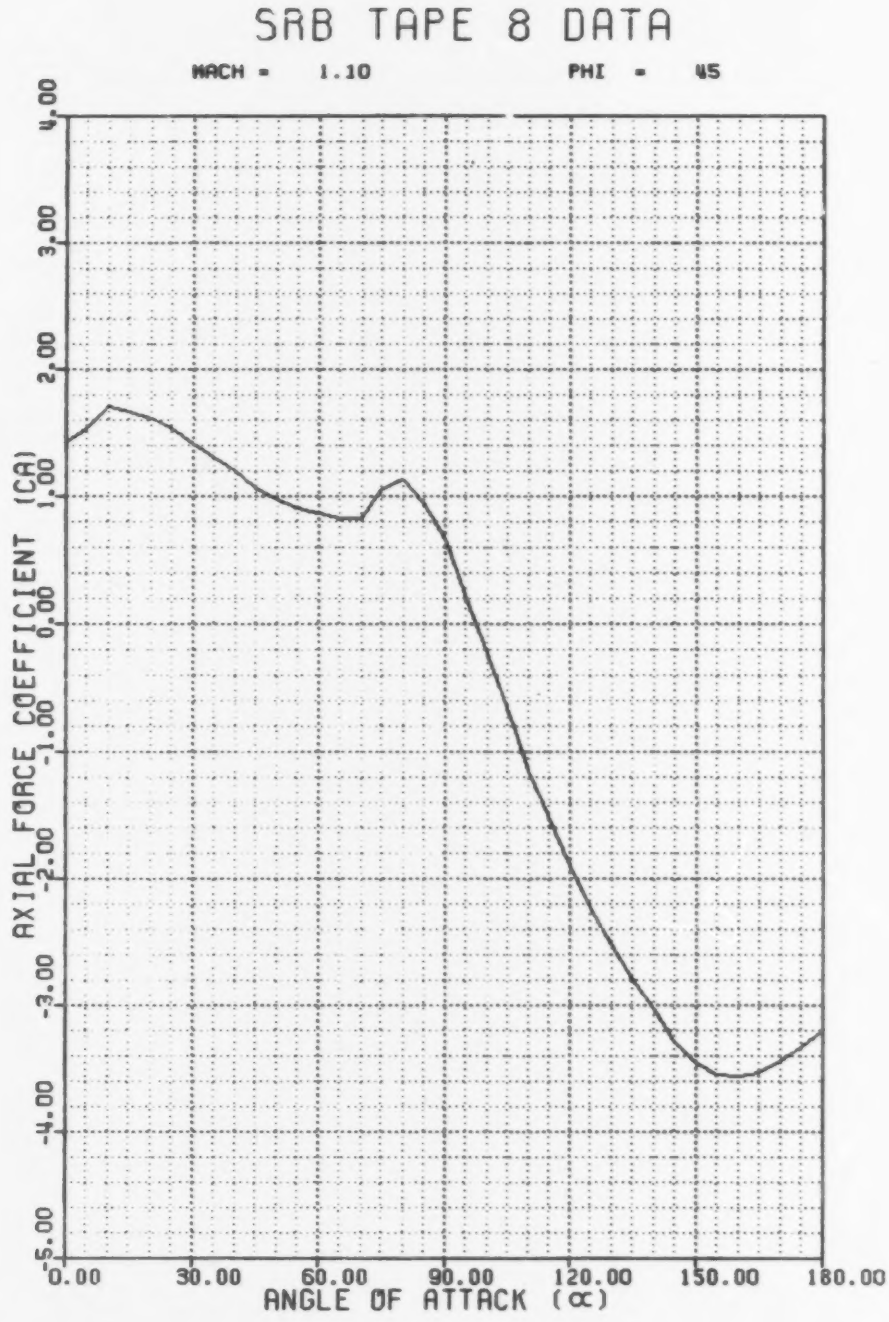

SRB TAPE 8 DATA
MACH = 1.05
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

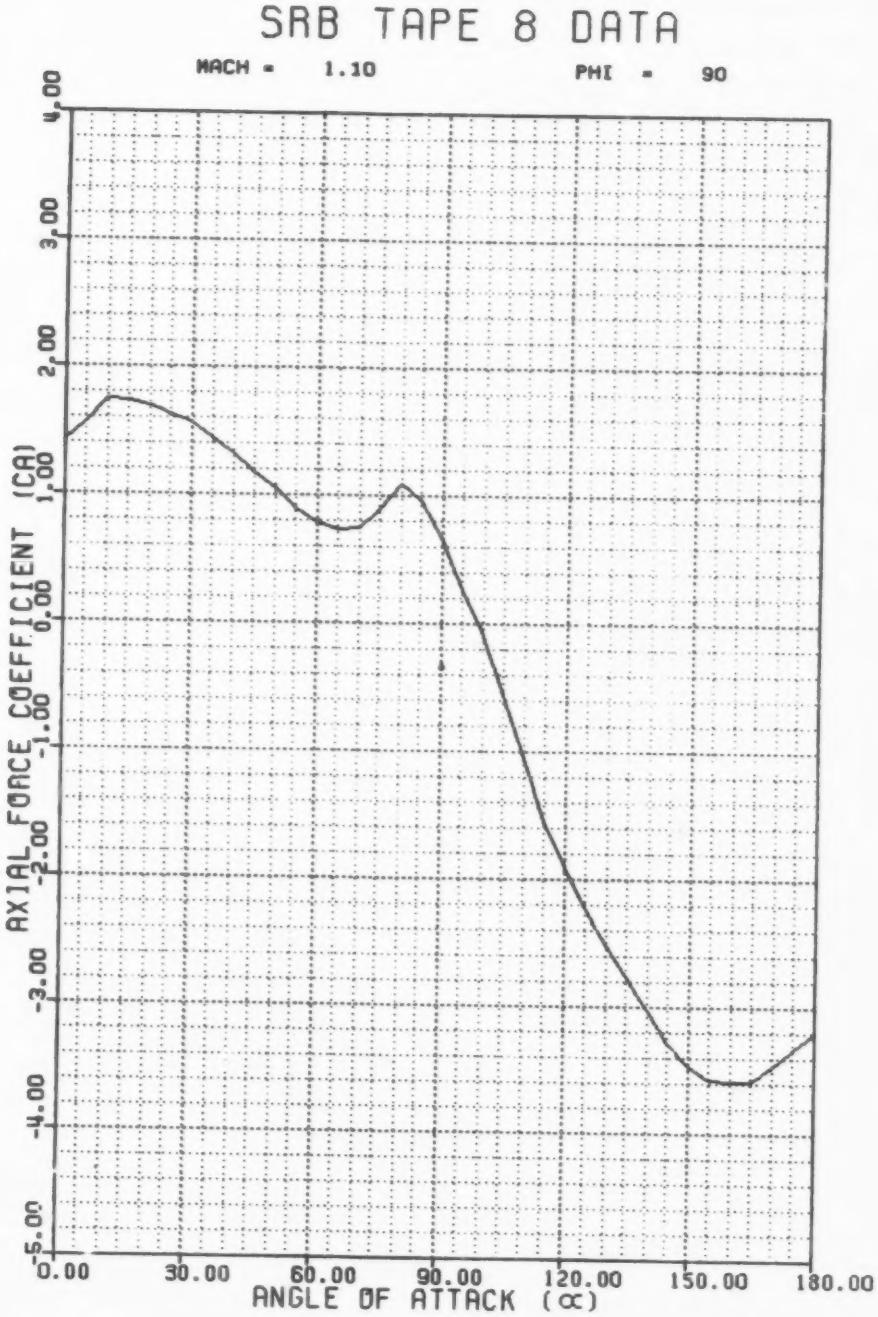

SRB TAPE 8 DATA
MACH = 1.05
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

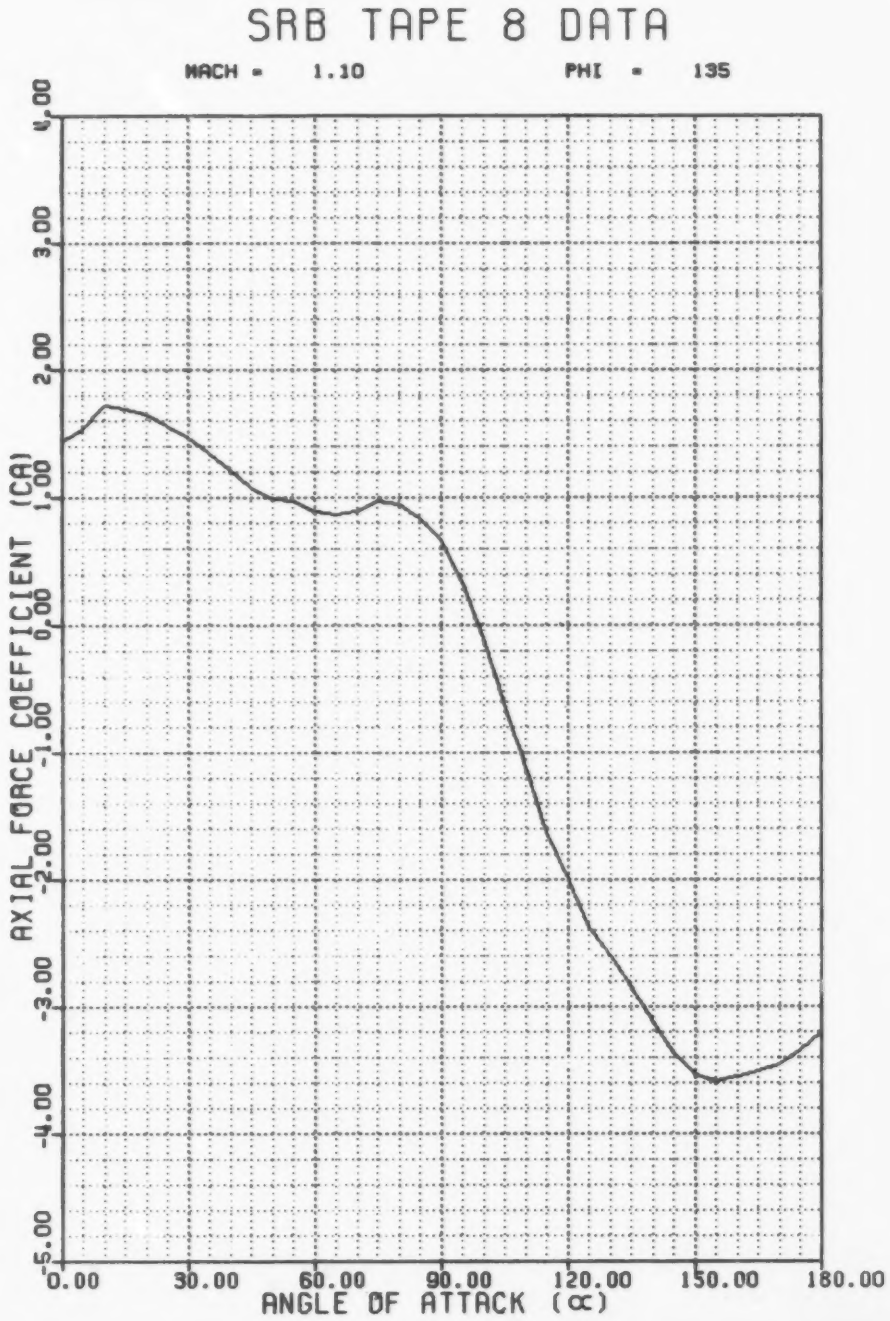

SRB TAPE 8 DATA
MACH = 1.05
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

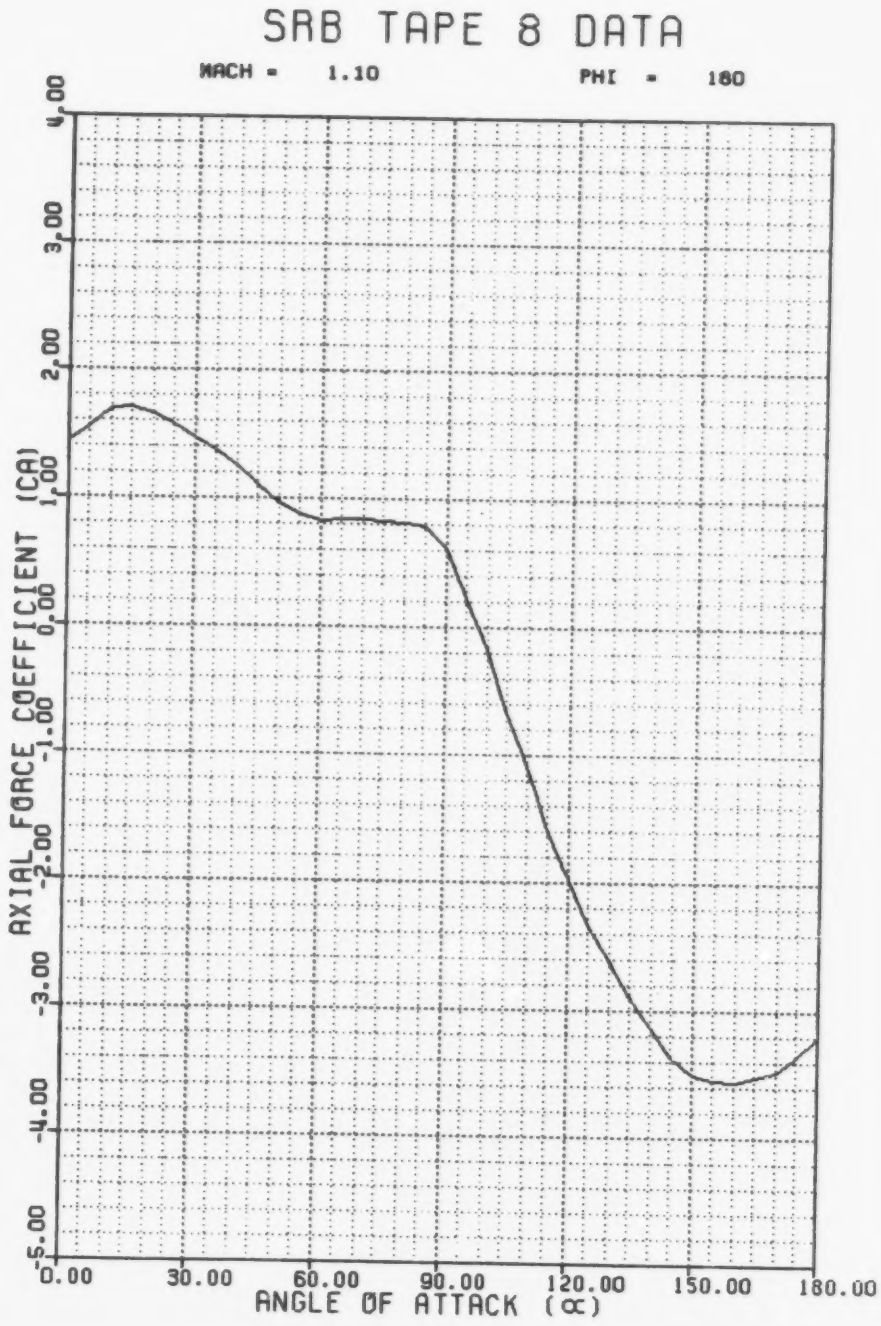

SRB TAPE 8 DATA
MACH = 1.05
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

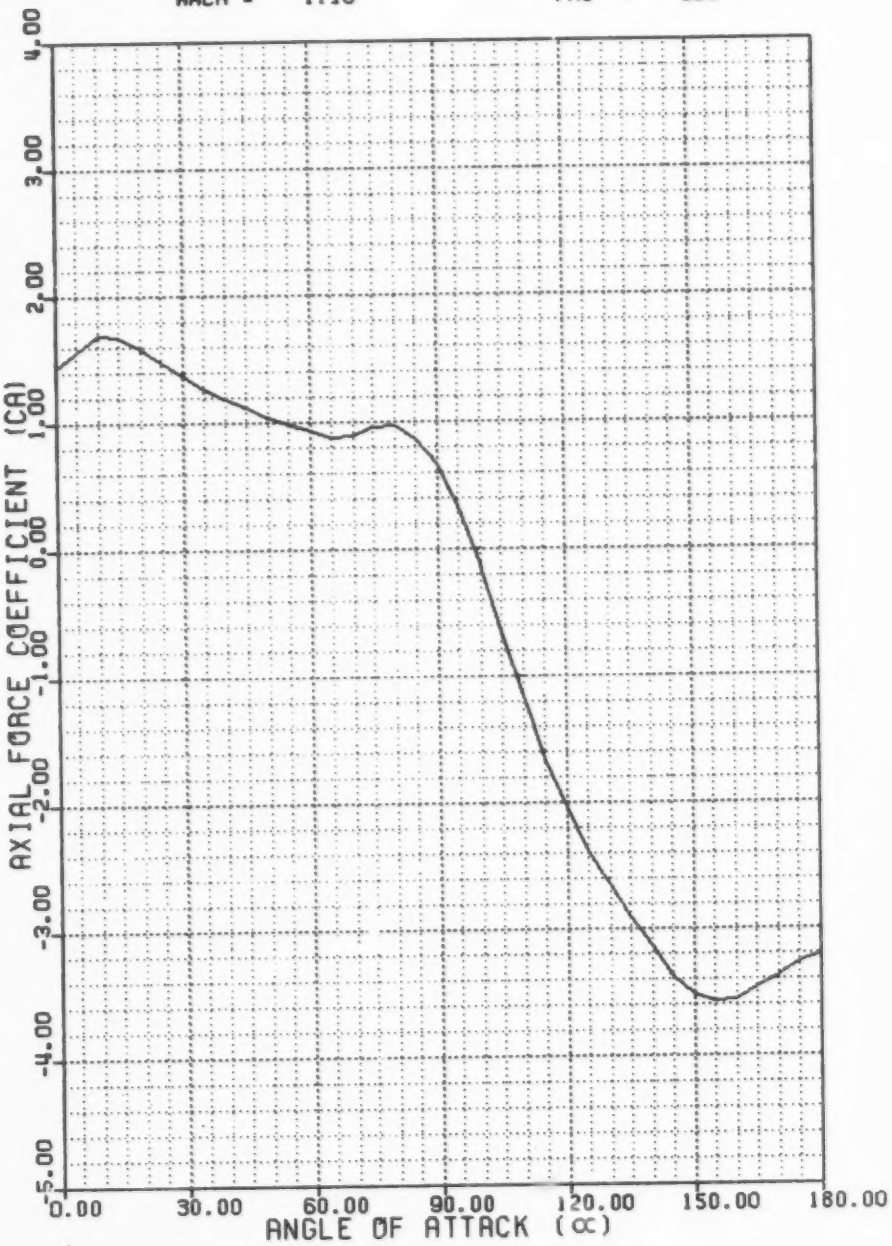

SRB TAPE 8 DATA
MACH = 1.10
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

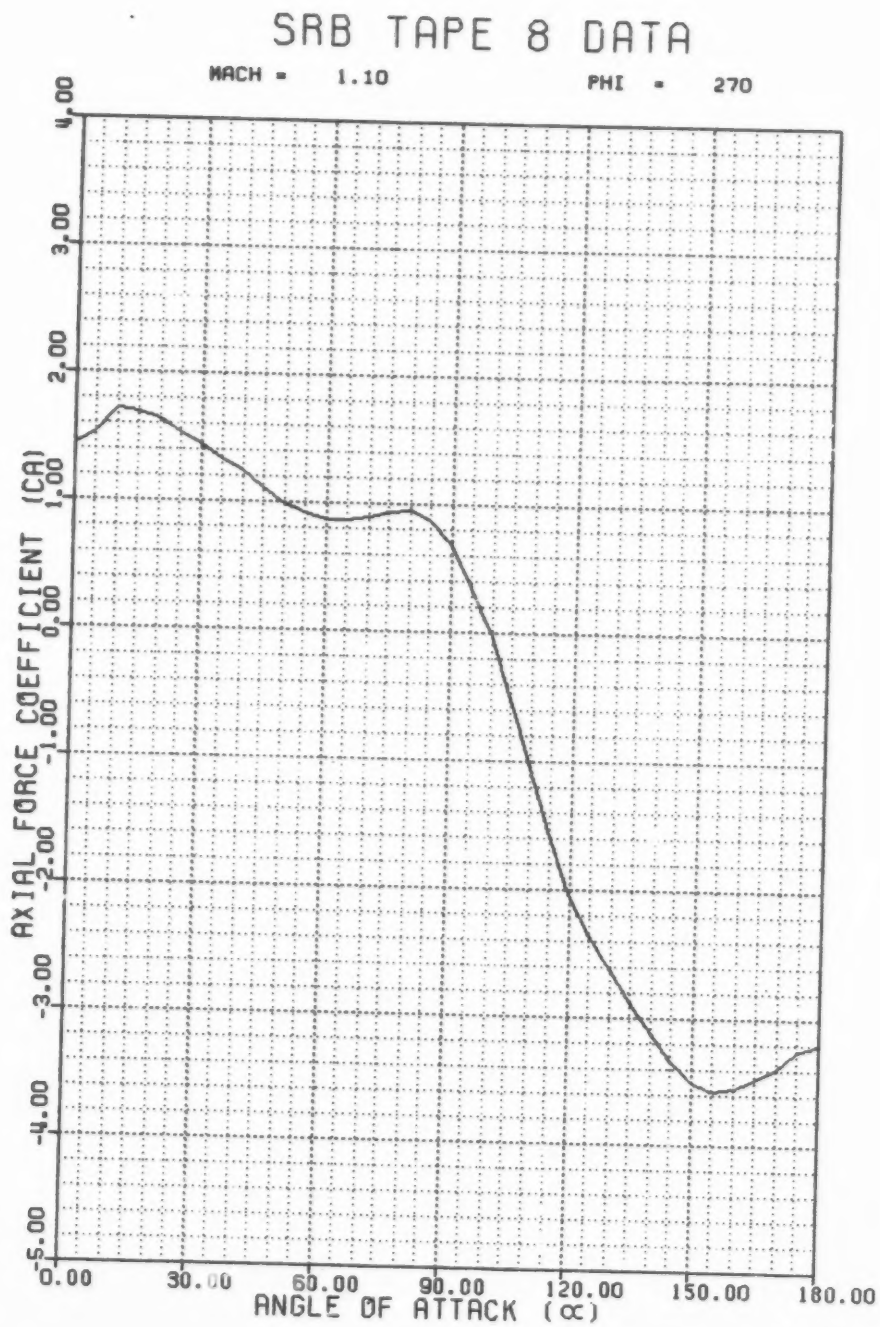

SRB TAPE 8 DATA
MACH = 1.10
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

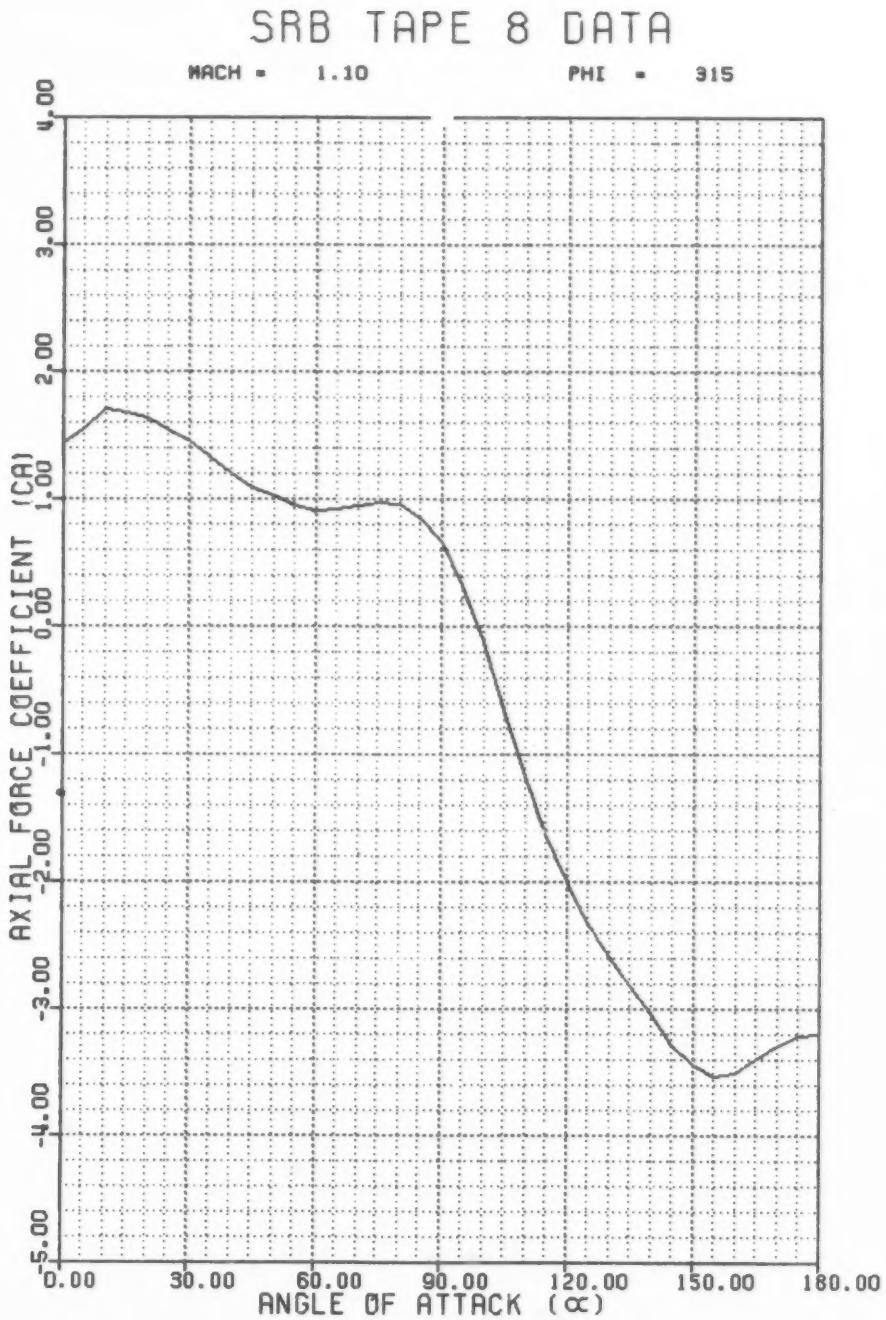

SRB TAPE 8 DATA
MACH = 1.10
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

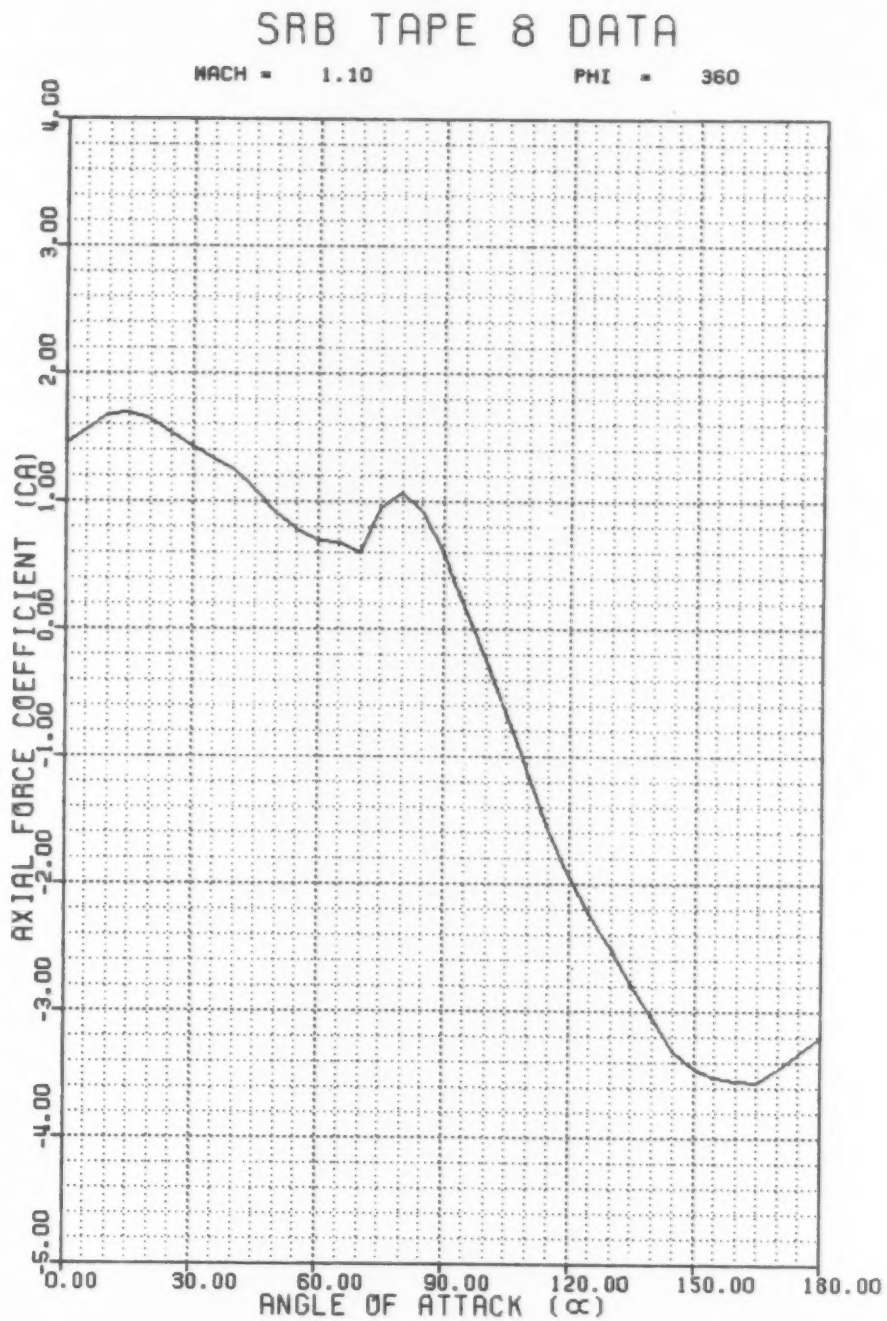
SRB TAPE 8 DATA

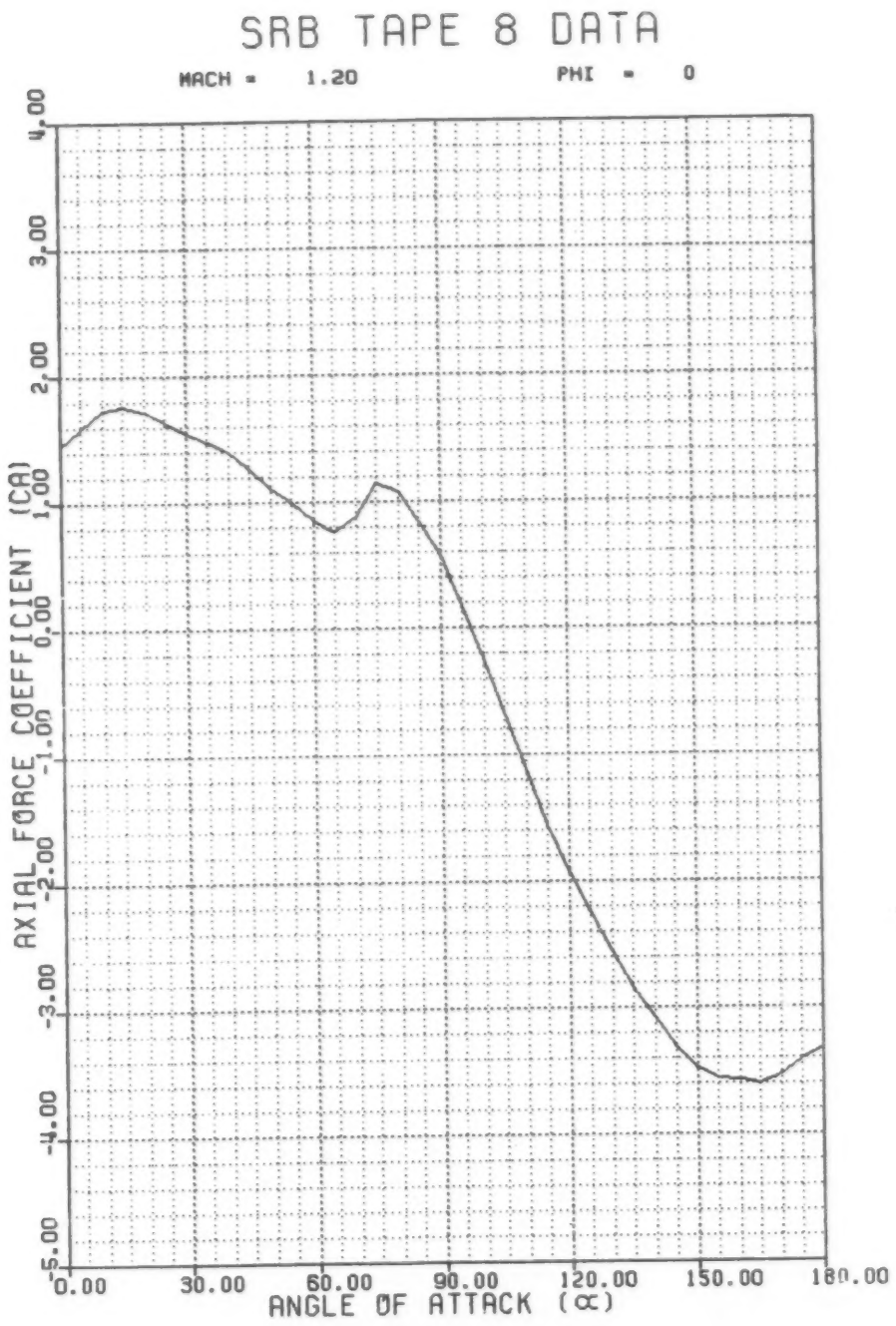
MACH = 1.10 PHI = 225

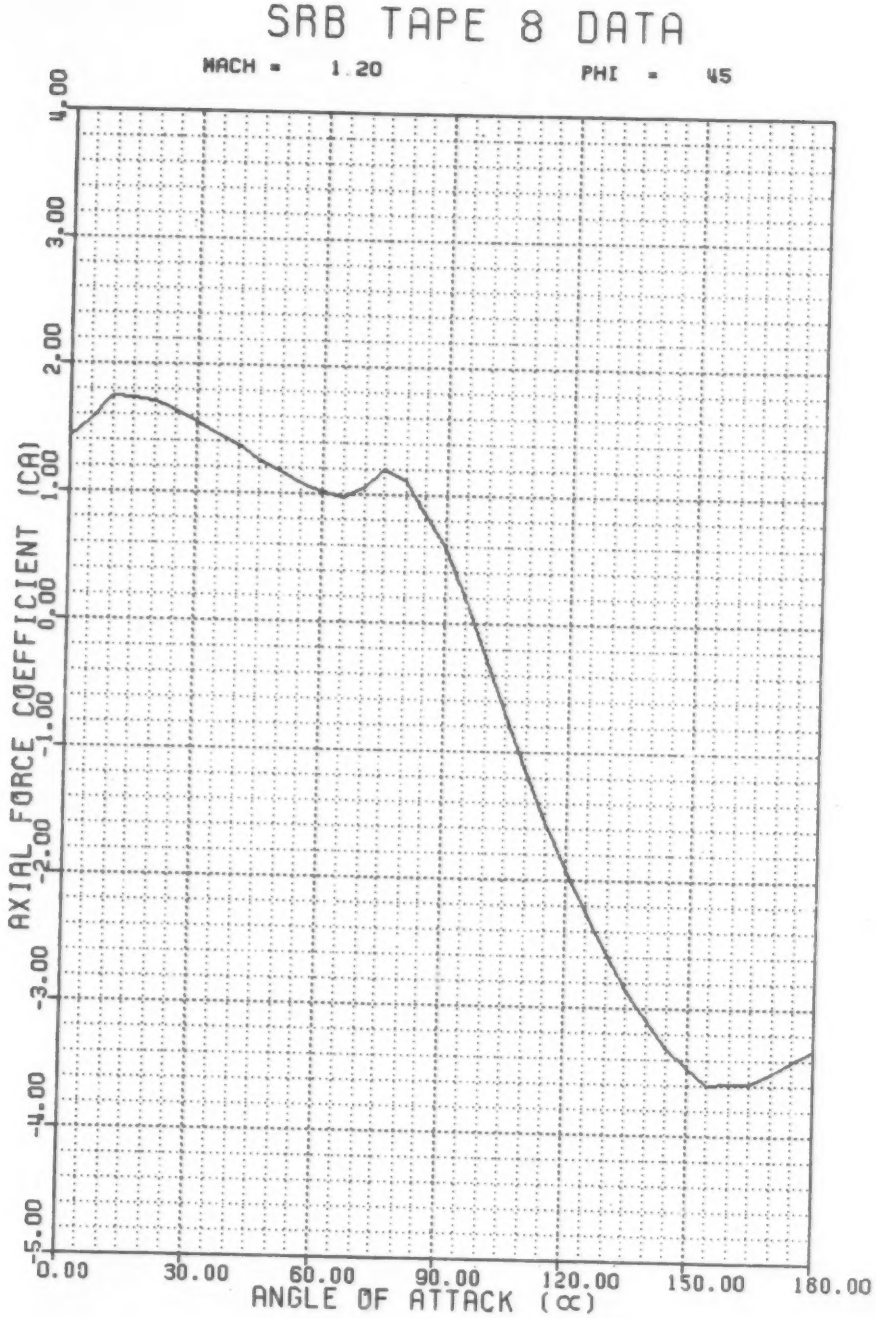


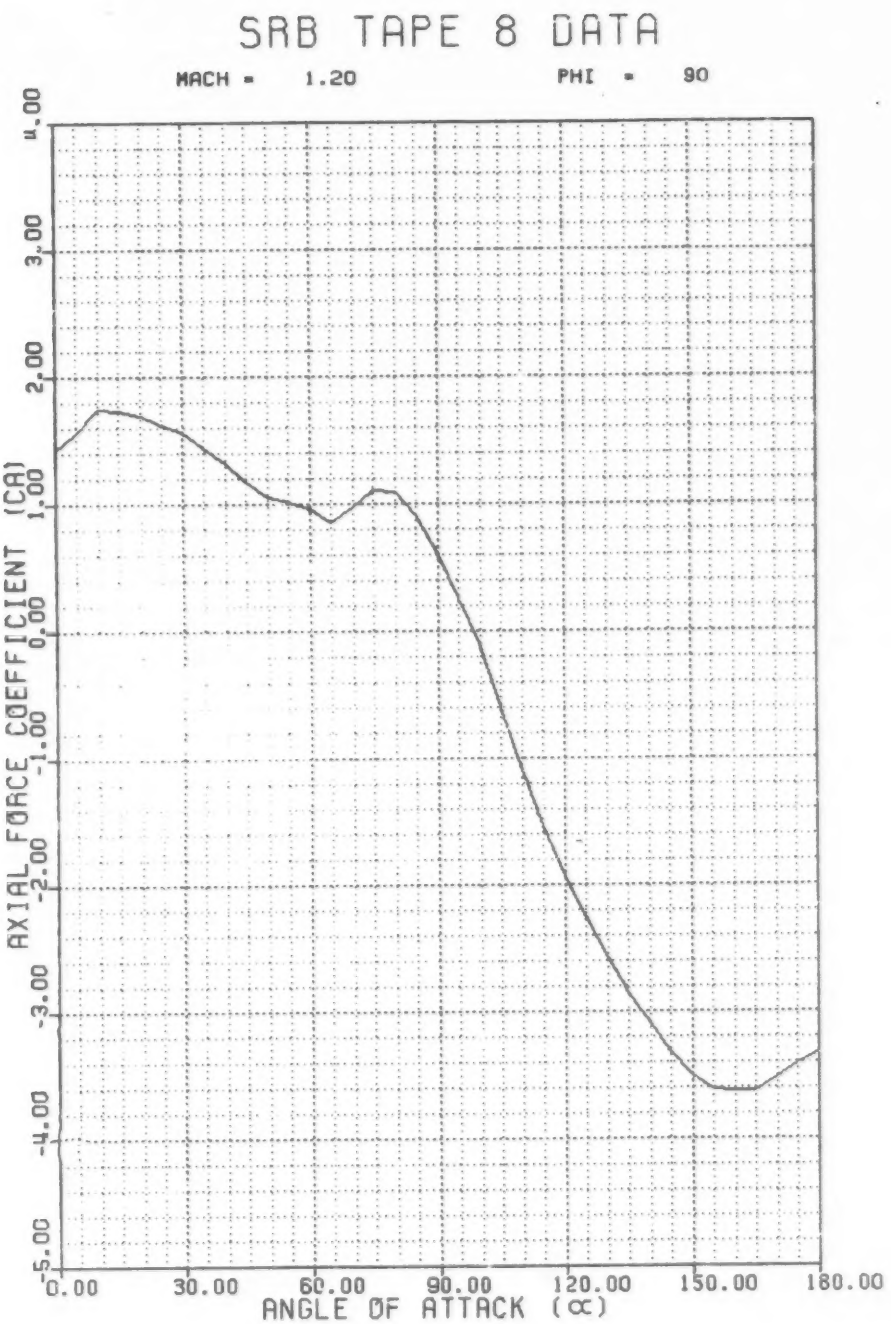

SRB TAPE 8 DATA
MACH = 1.10
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

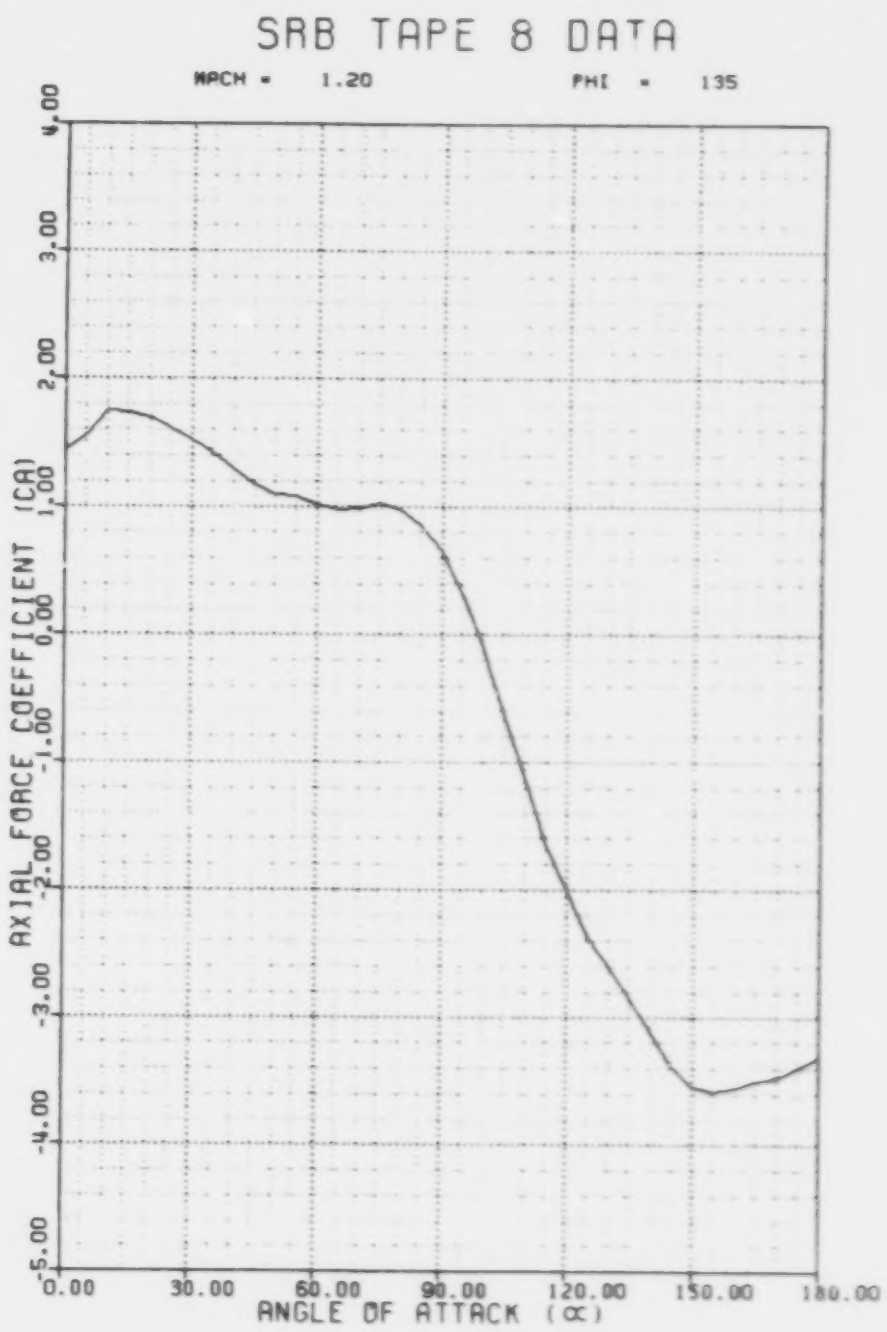

SRB TAPE 8 DATA
MACH = 1.10
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

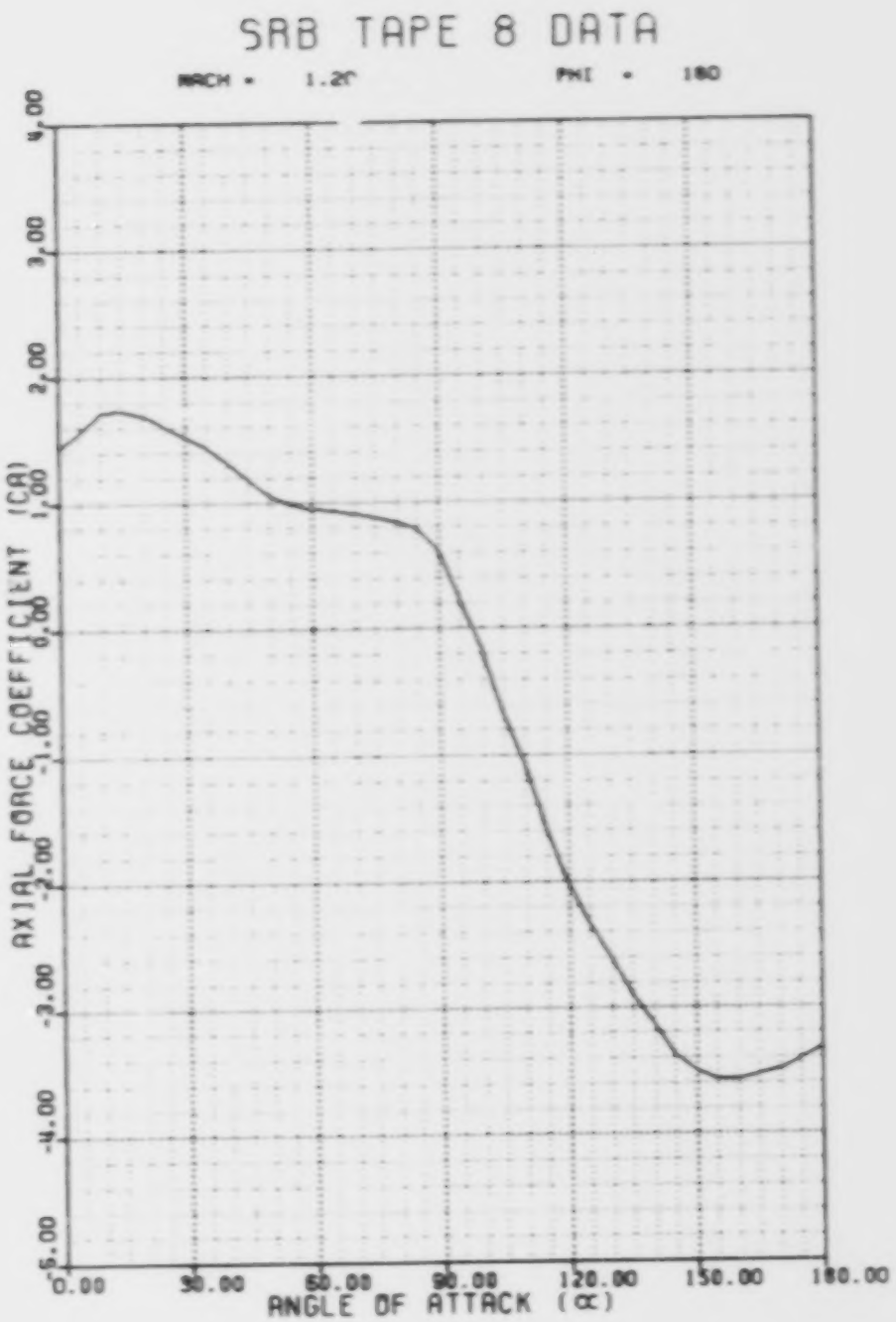

SRB TAPE 8 DATA
MACH = 1.20
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

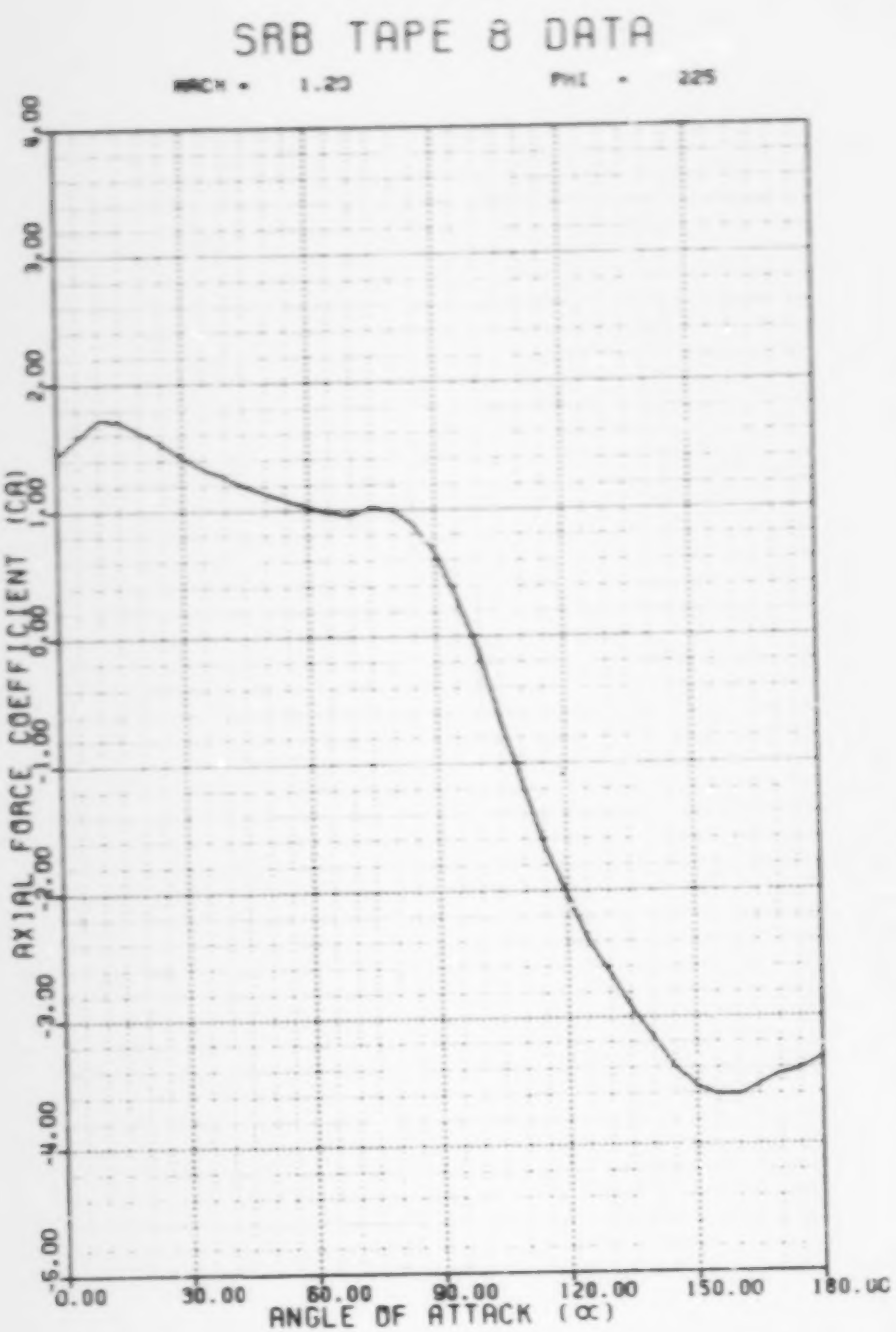

SRB TAPE 8 DATA
MACH = 1.20
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

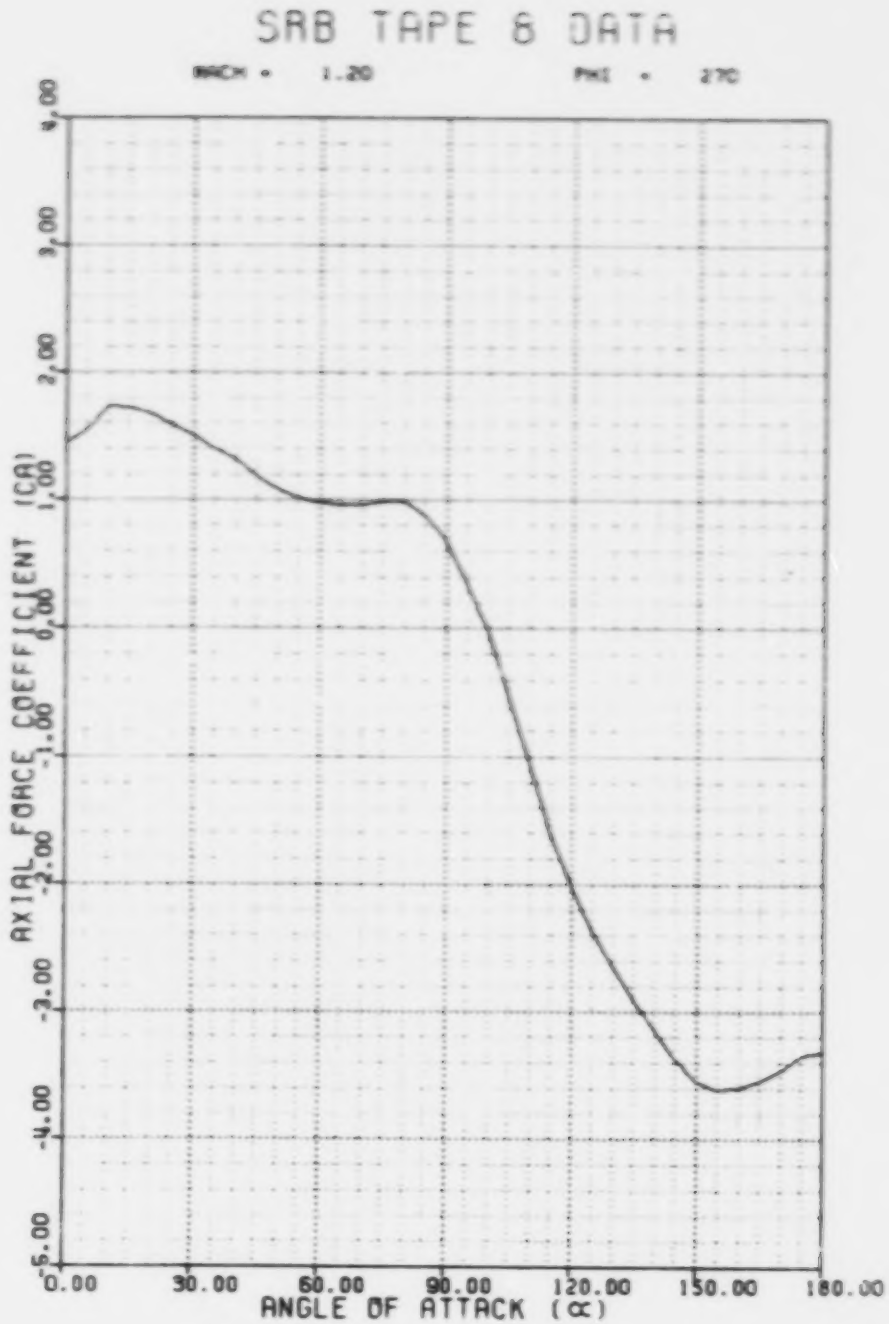

SRB TAPE 8 DATA
MACH = 1.20
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

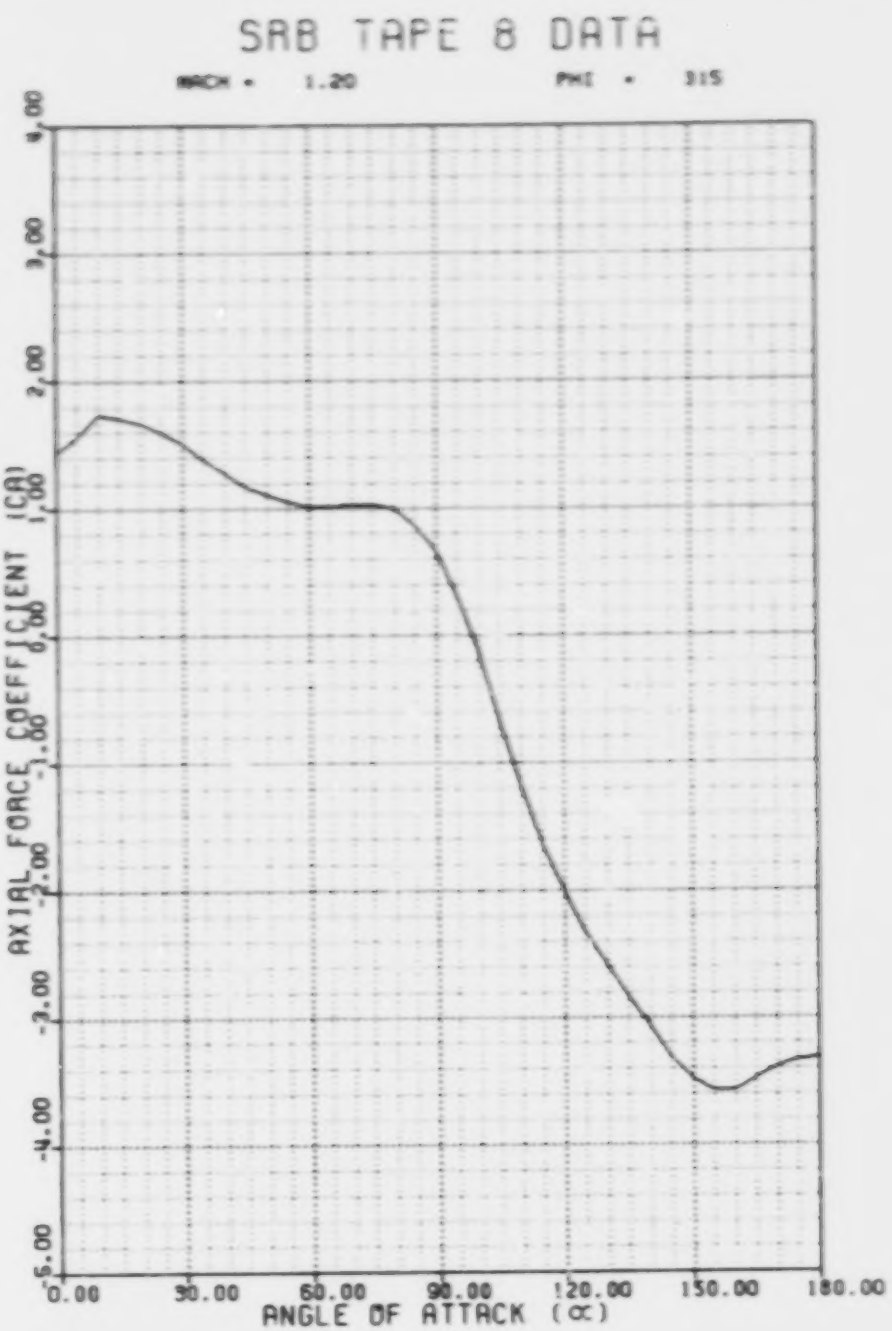
B-670


SRB TAPE 8 DATA
MACH • 1.20
PHI • 180
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

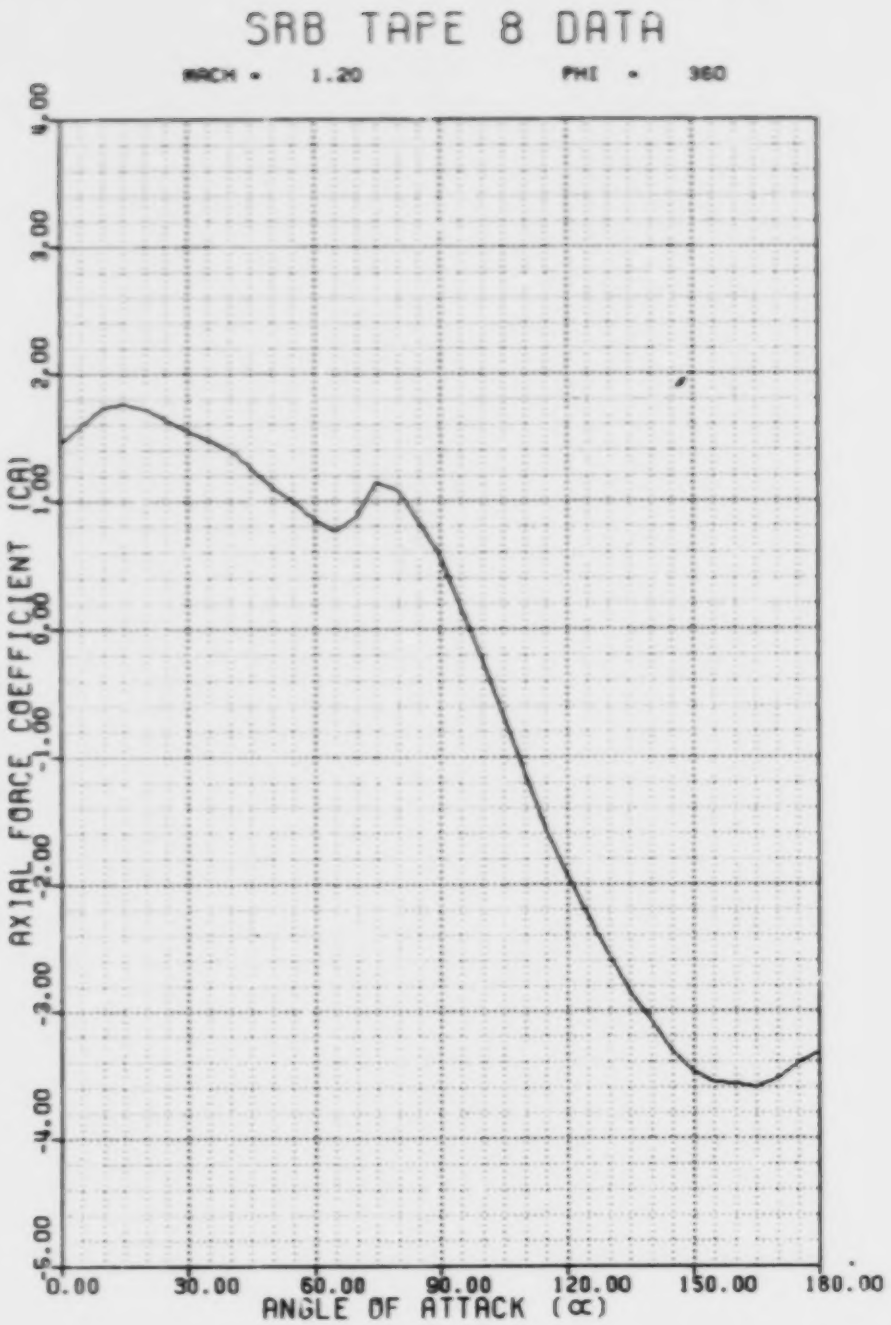

SAB TAPE 8 DATA
MACH • 1.25
PHI • 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

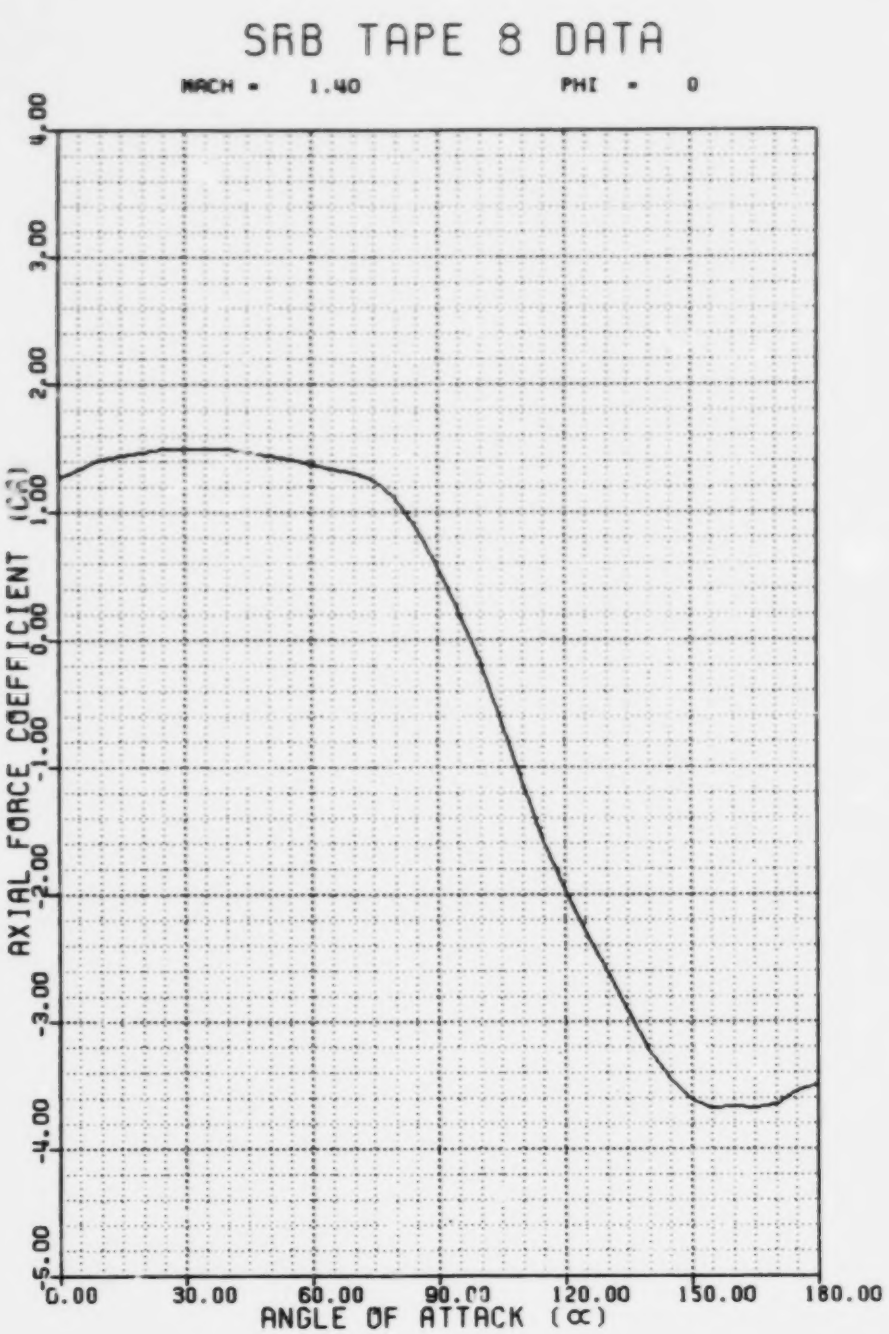
B-872

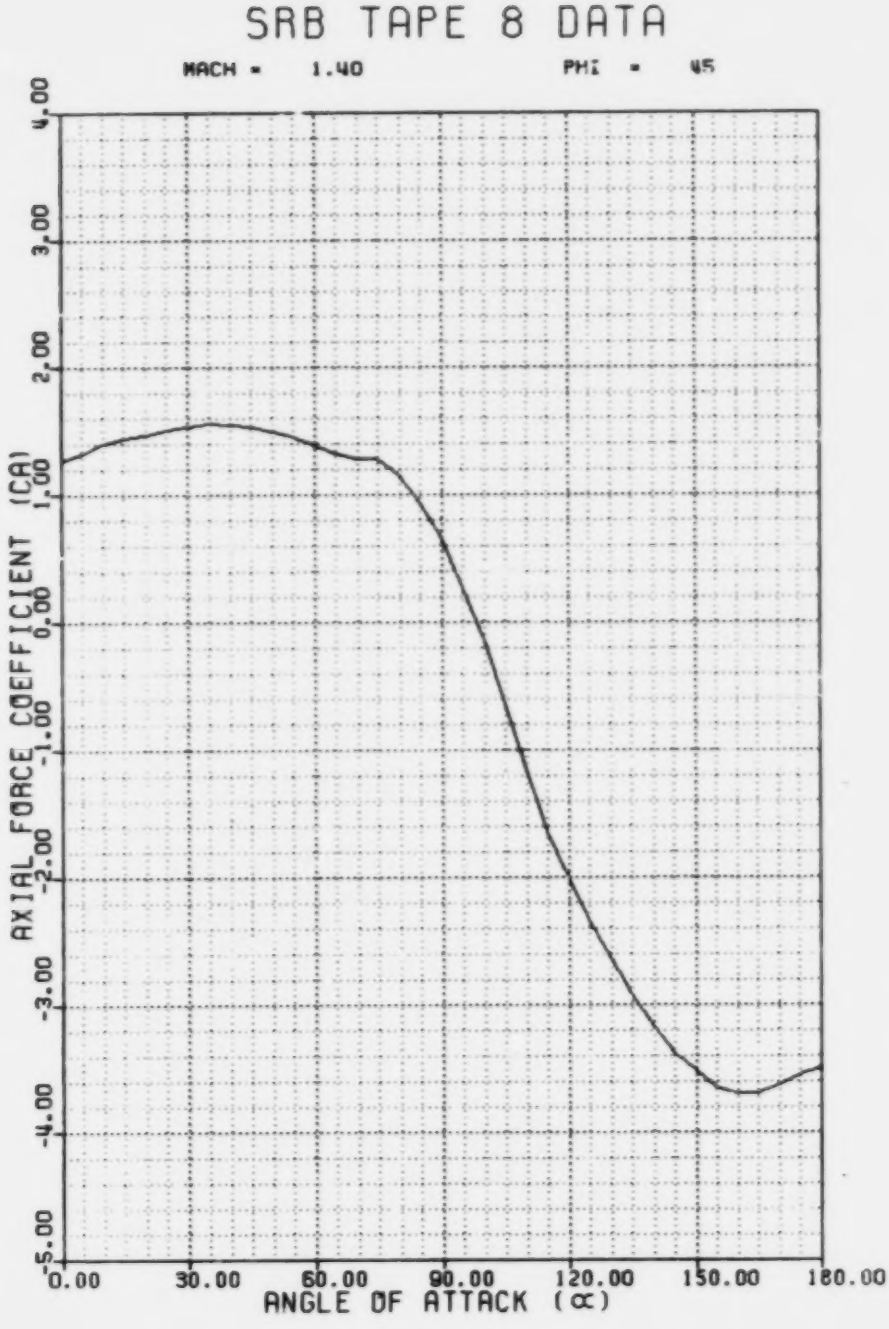

SAB TAPE 6 DATA
MACH = 1.20
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

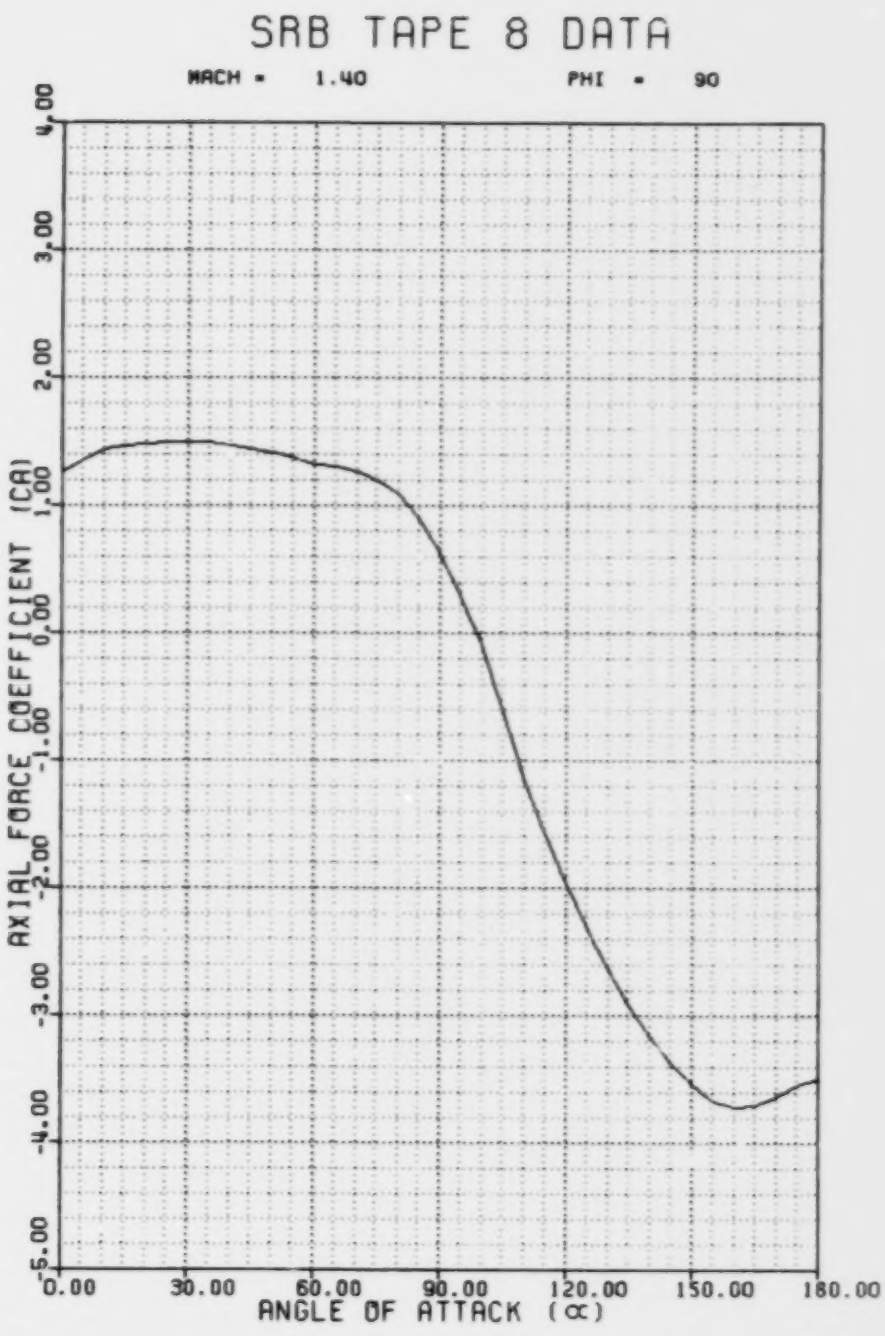

SAB TAPE 8 DATA
MACH • 1.20
PHI • 315
AXIAL FORCE COEFFICIENT (CA)
9.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-674


SRB TAPE 8 DATA
MACH • 1.20
PHI • 360
AXIAL FORCE COEFFICIENT (CA)
6.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)



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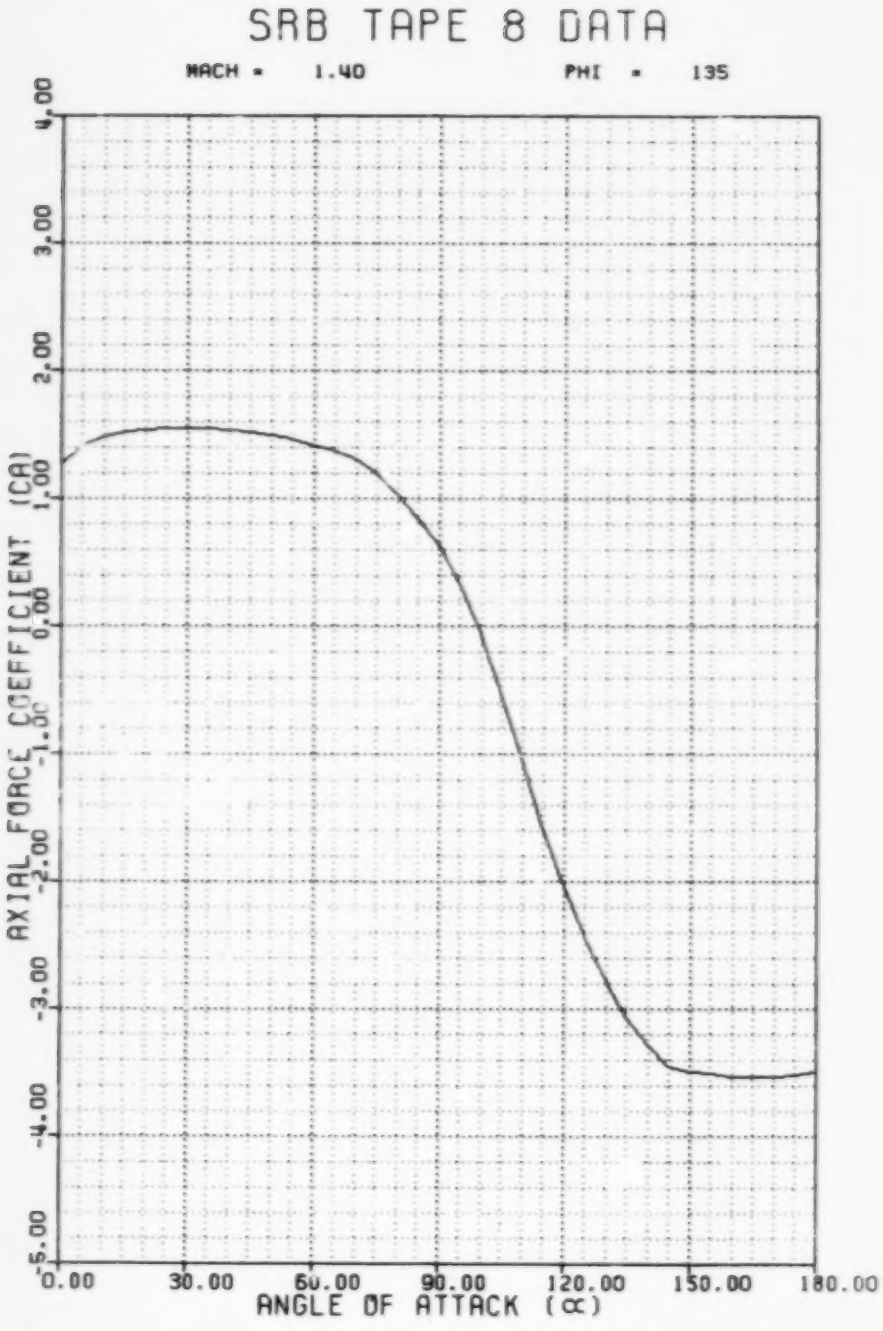
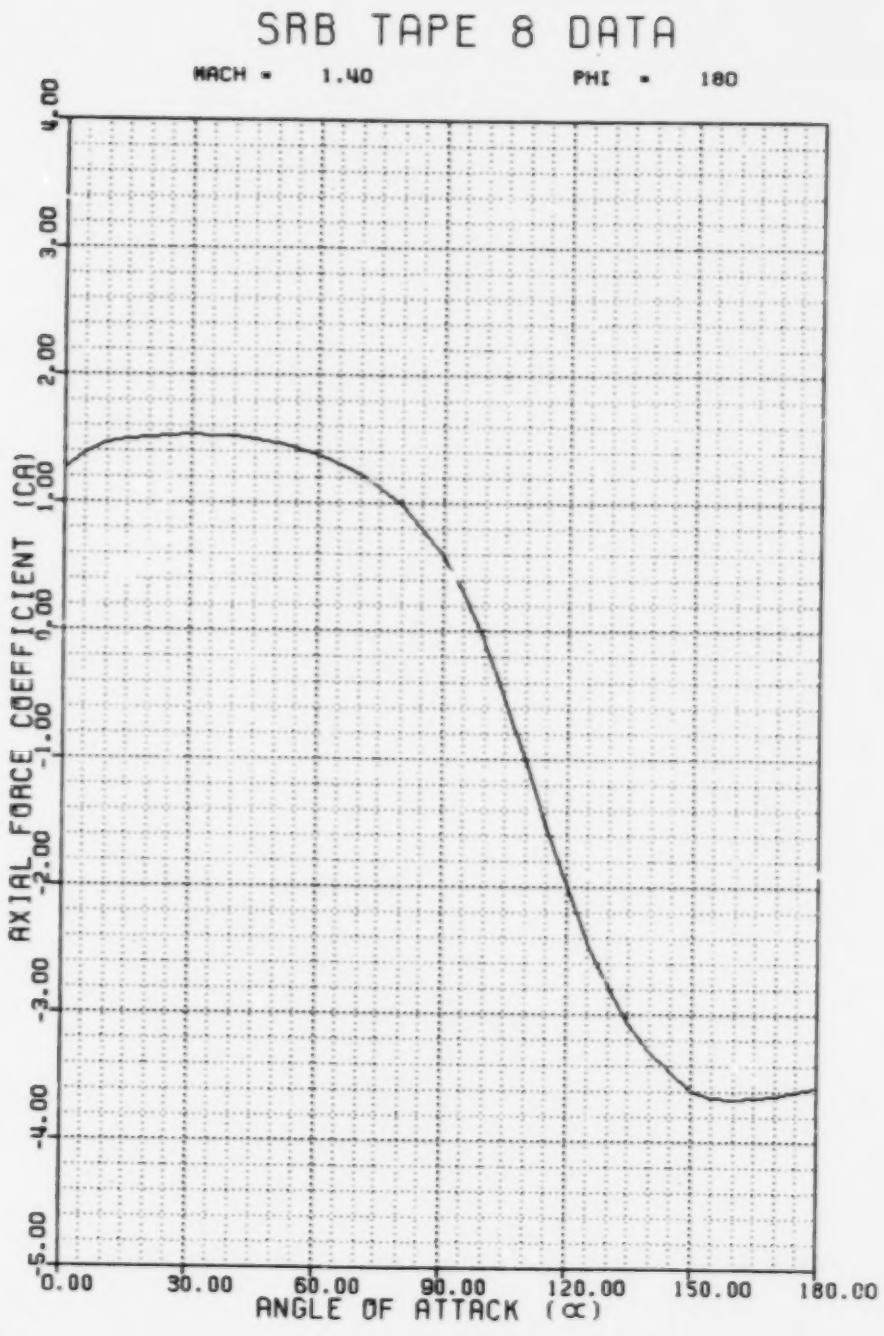
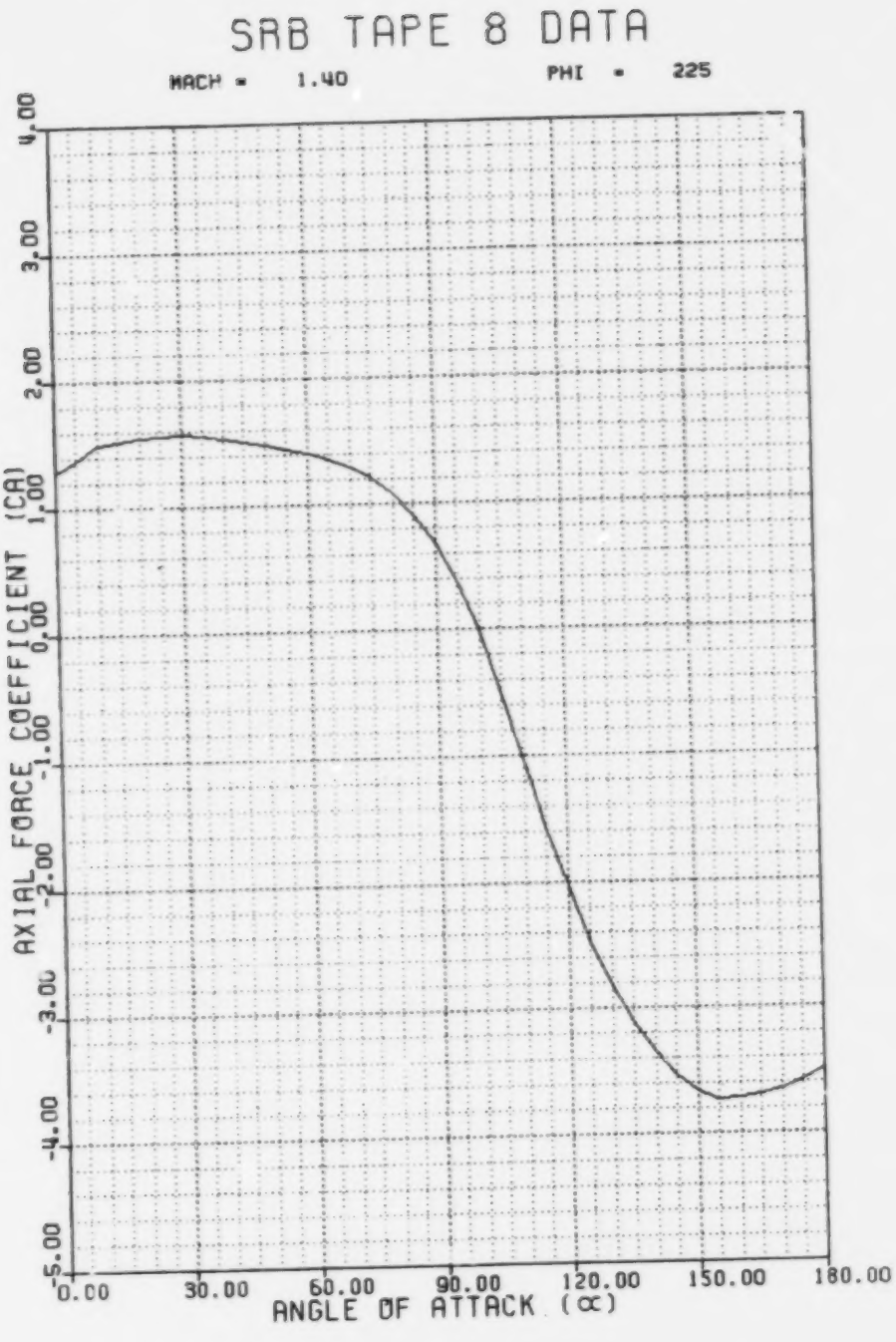
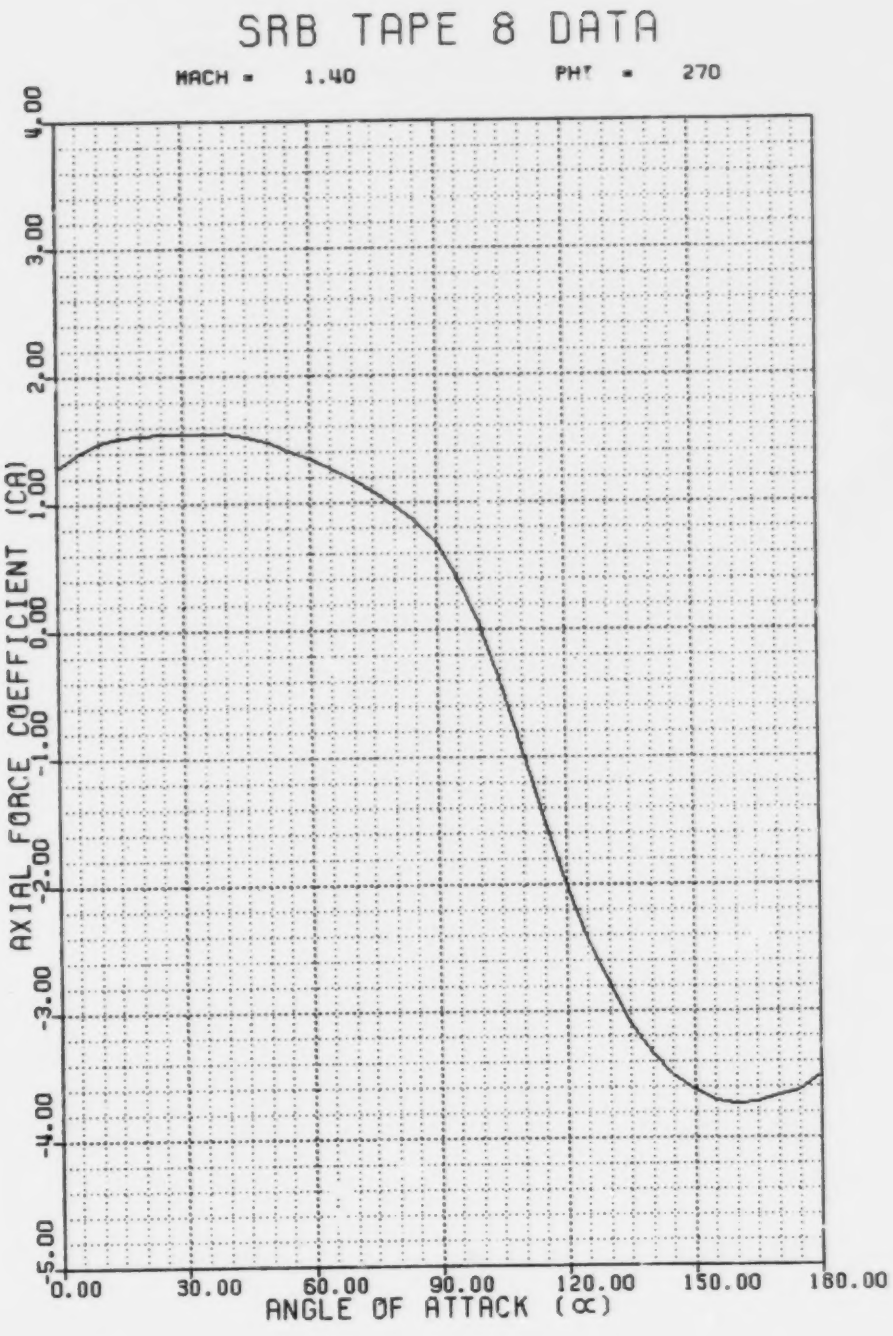
LOCKHEED-HUNTSVILLE ENGINEERING CENTER

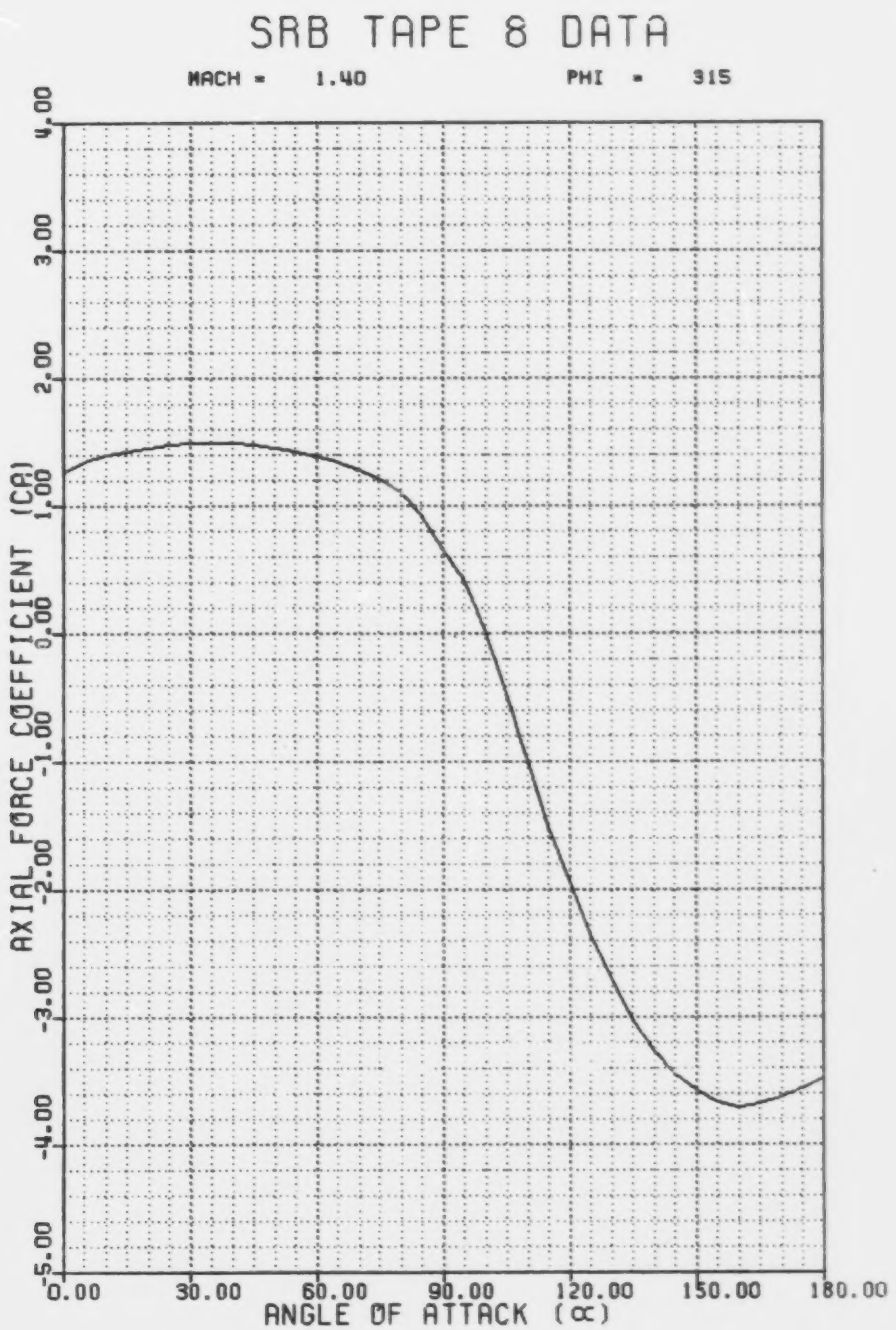

SRB TAPE 8 DATA
MACH = 1.40
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-679

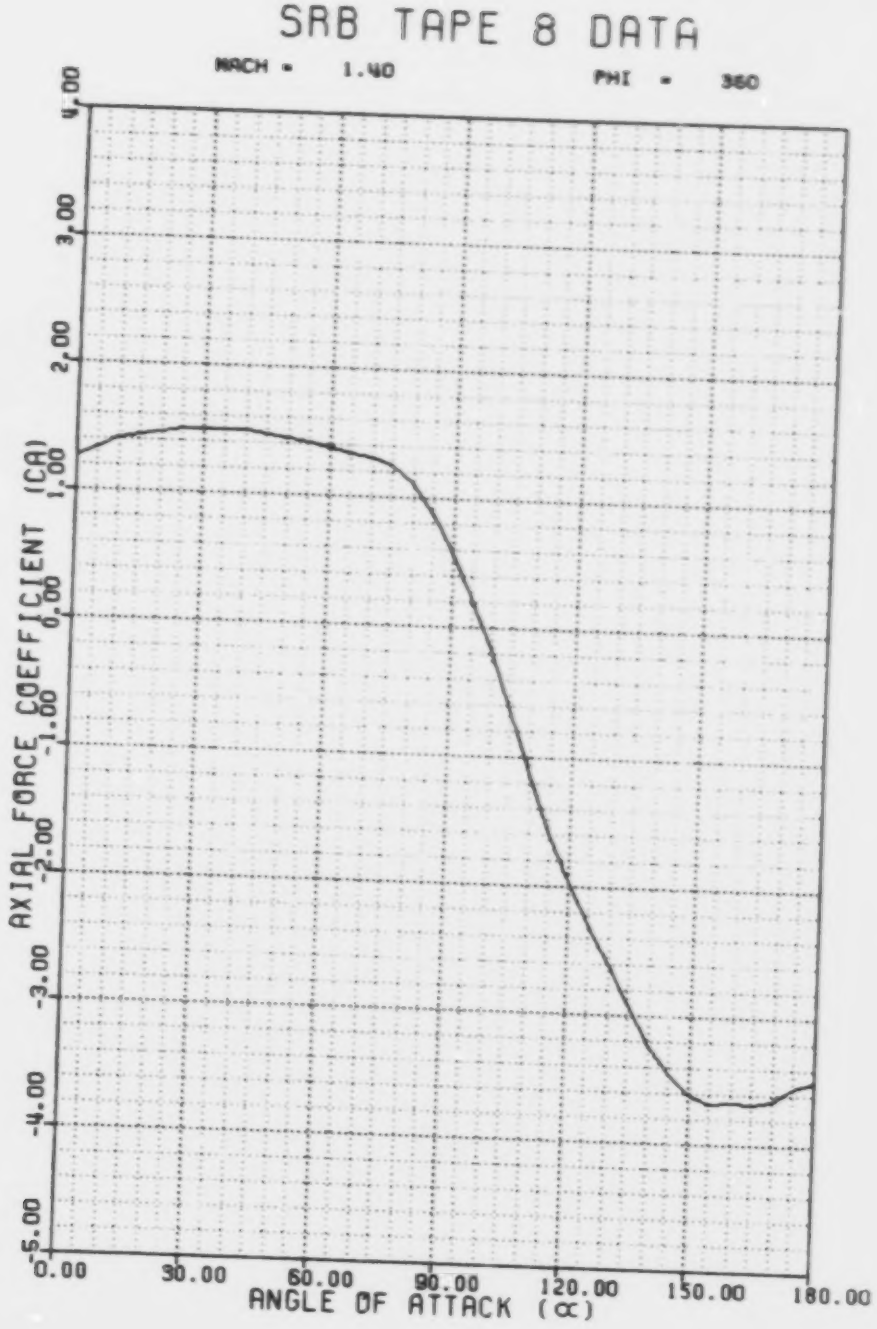

SRB TAPE 8 DATA
MACH = 1.40
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

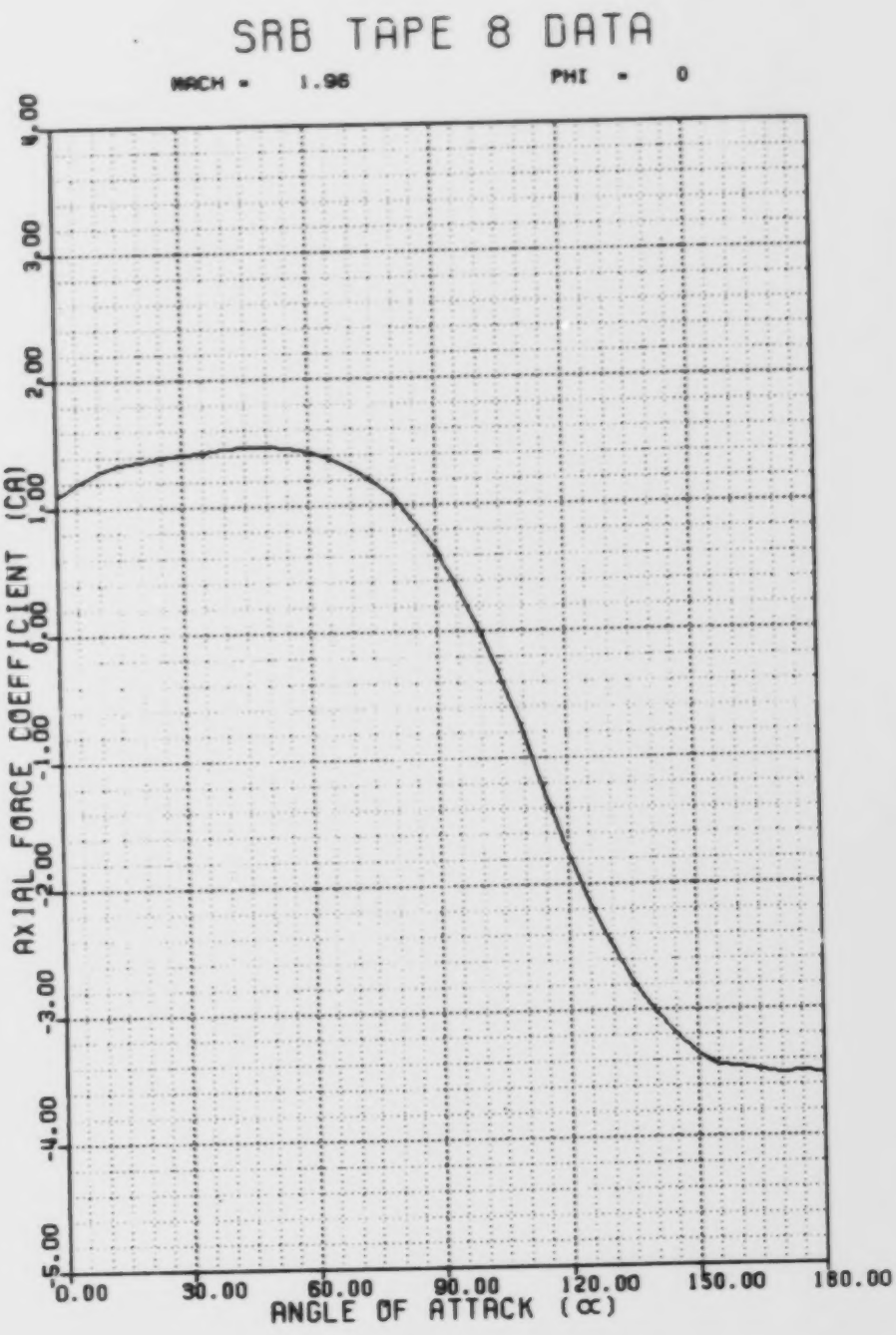

SRB TAPE 8 DATA
MACH = 1.40
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

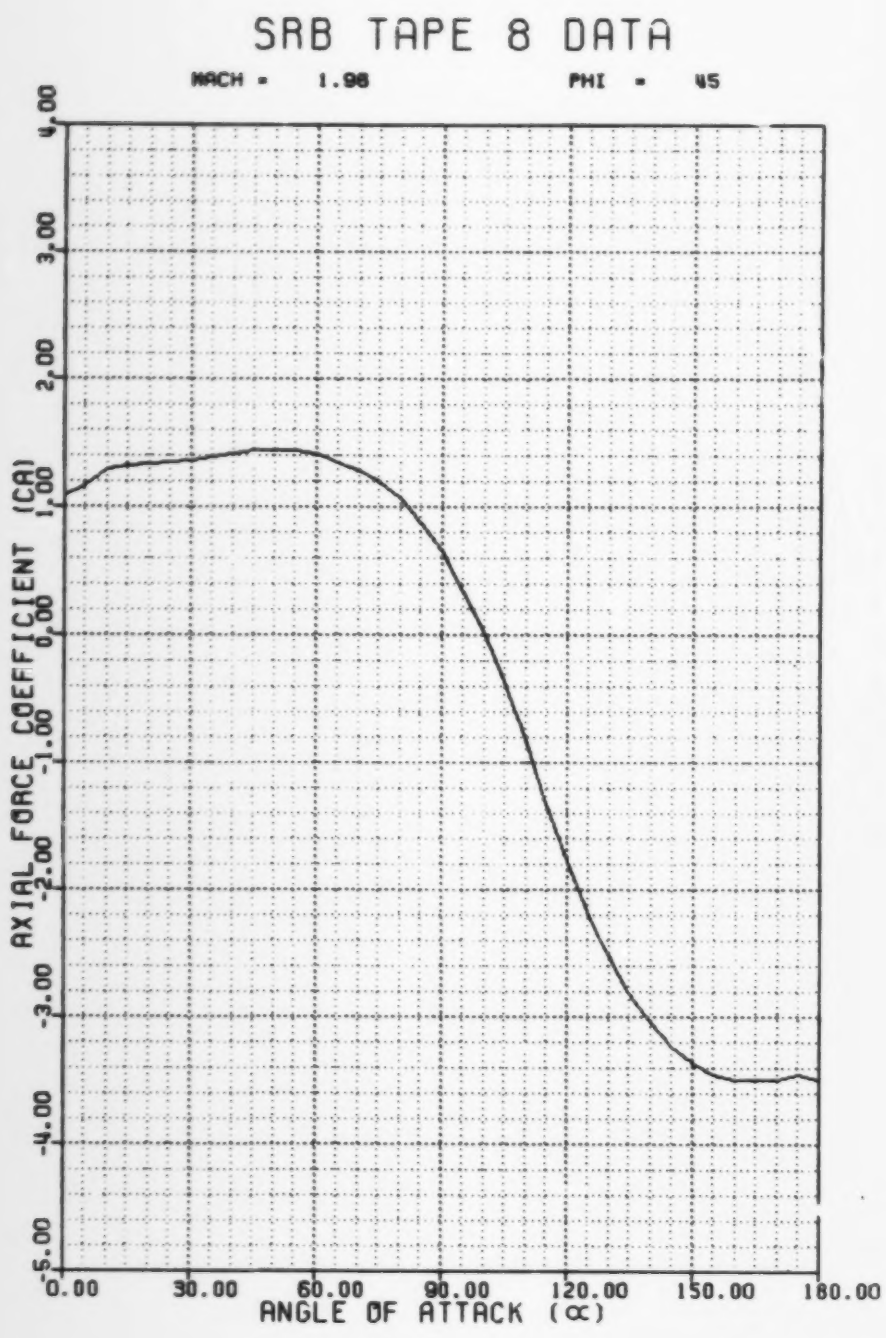

SRB TAPE 8 DATA
MACH = 1.40
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

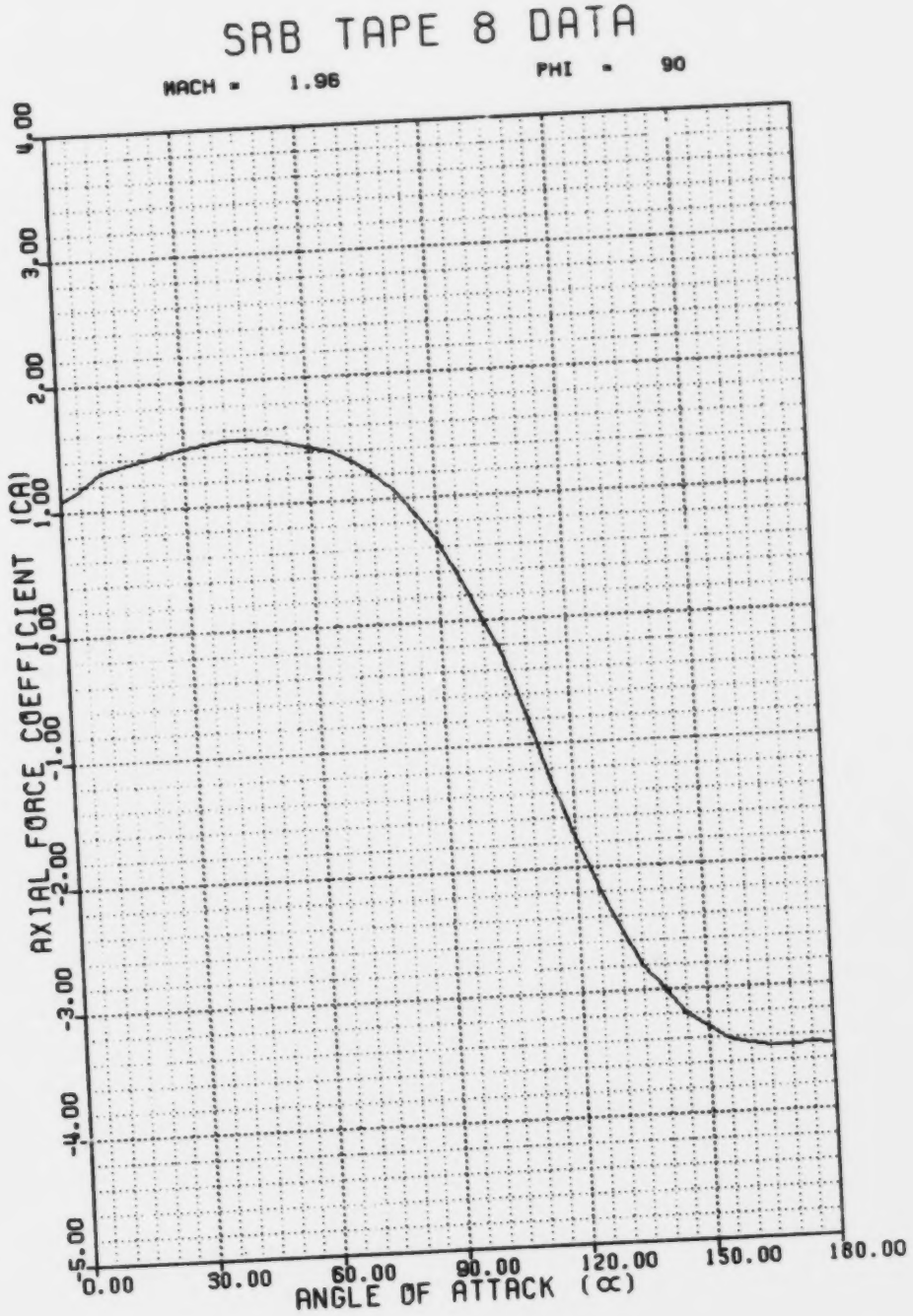

SRB TAPE 8 DATA
MACH = 1.40
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-883


SRB TAPE 8 DATA
MACH = 1.40
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.98
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
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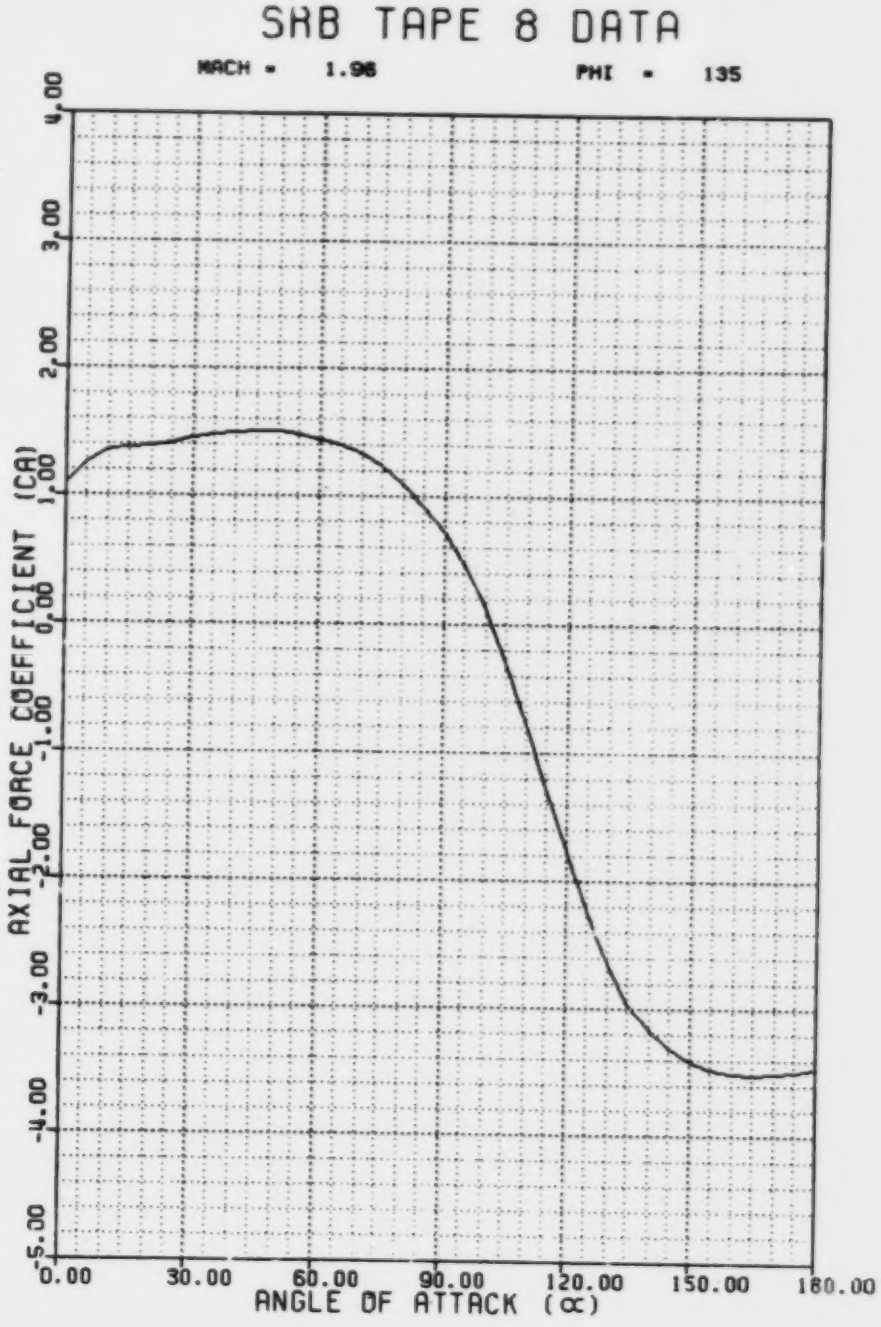
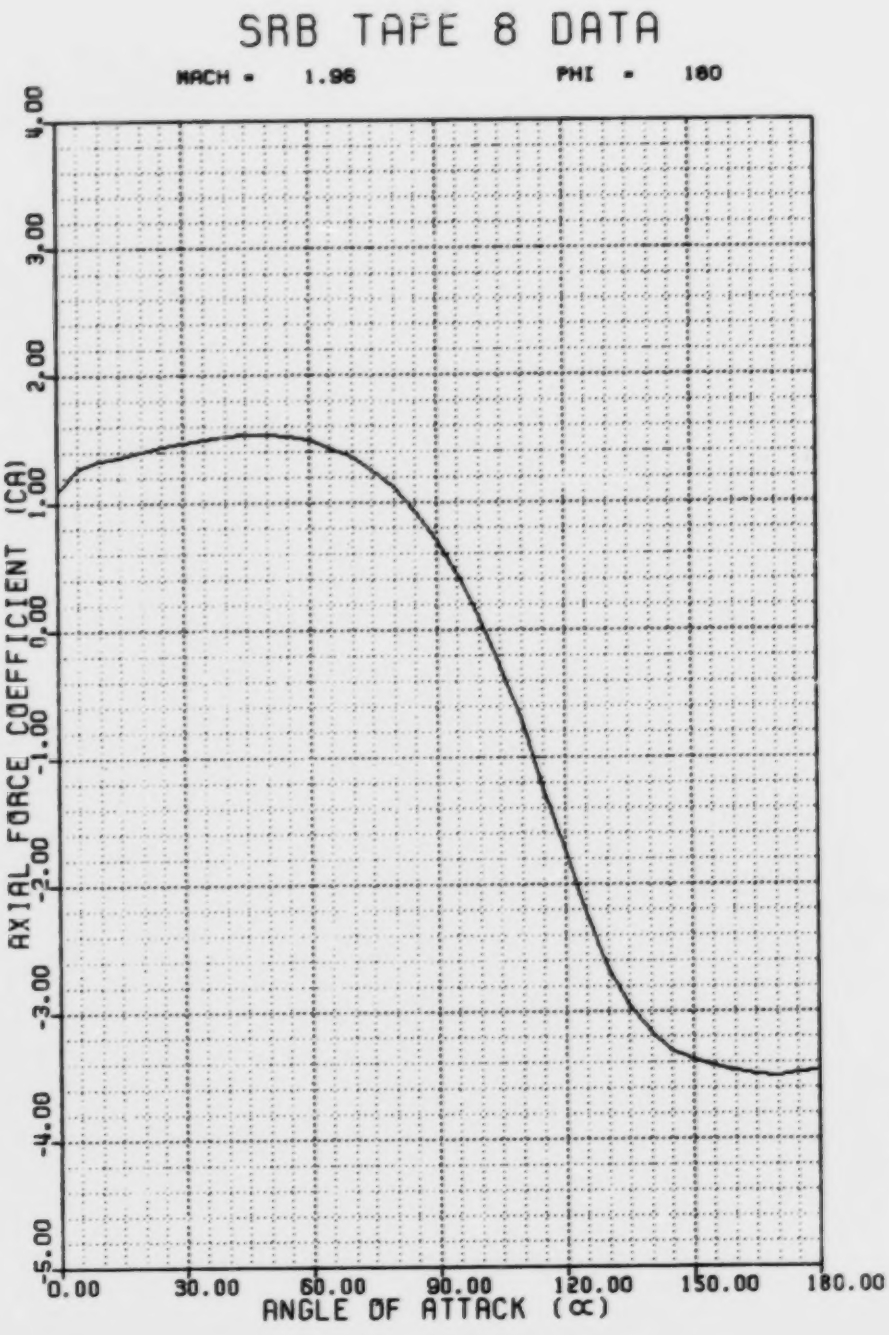
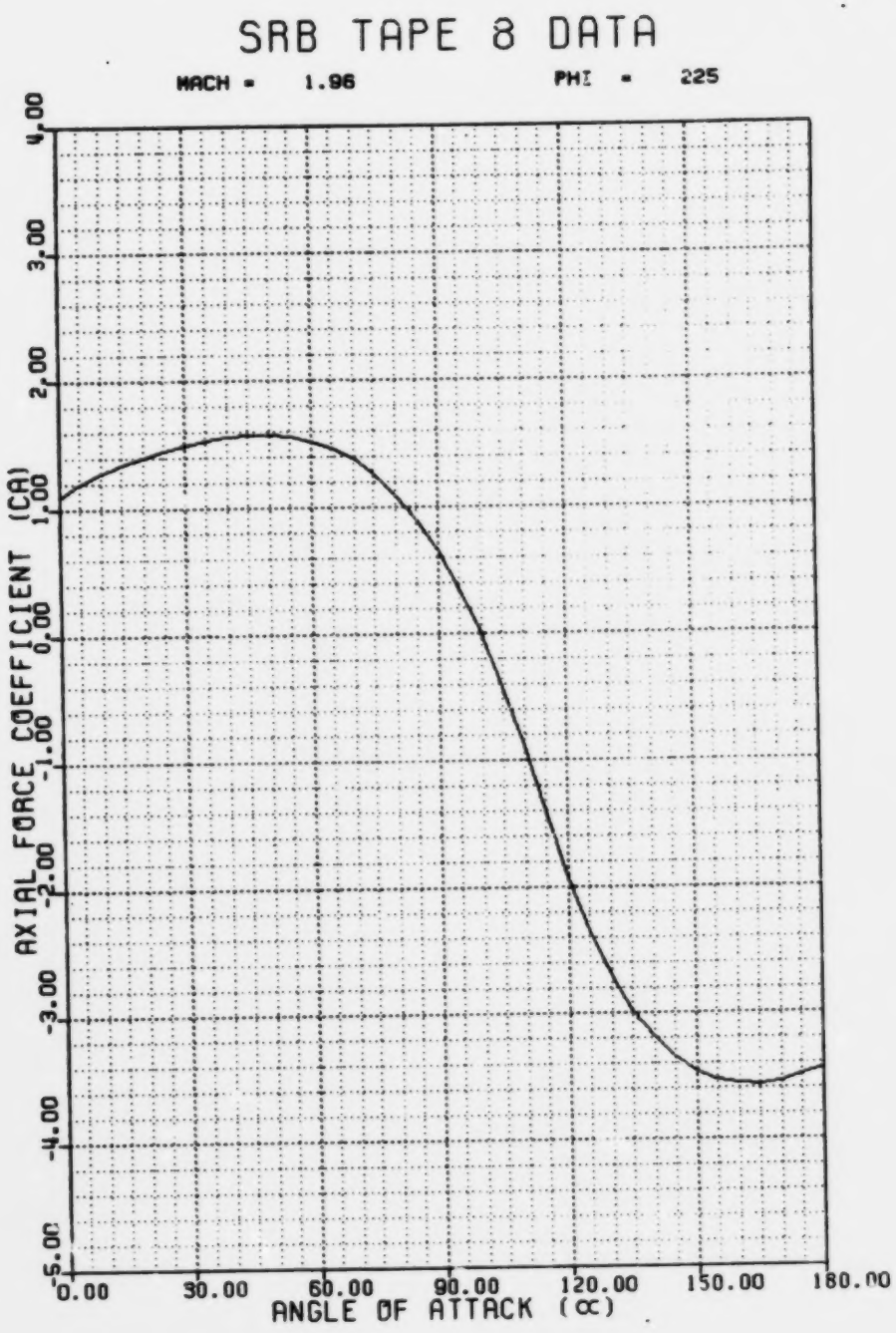
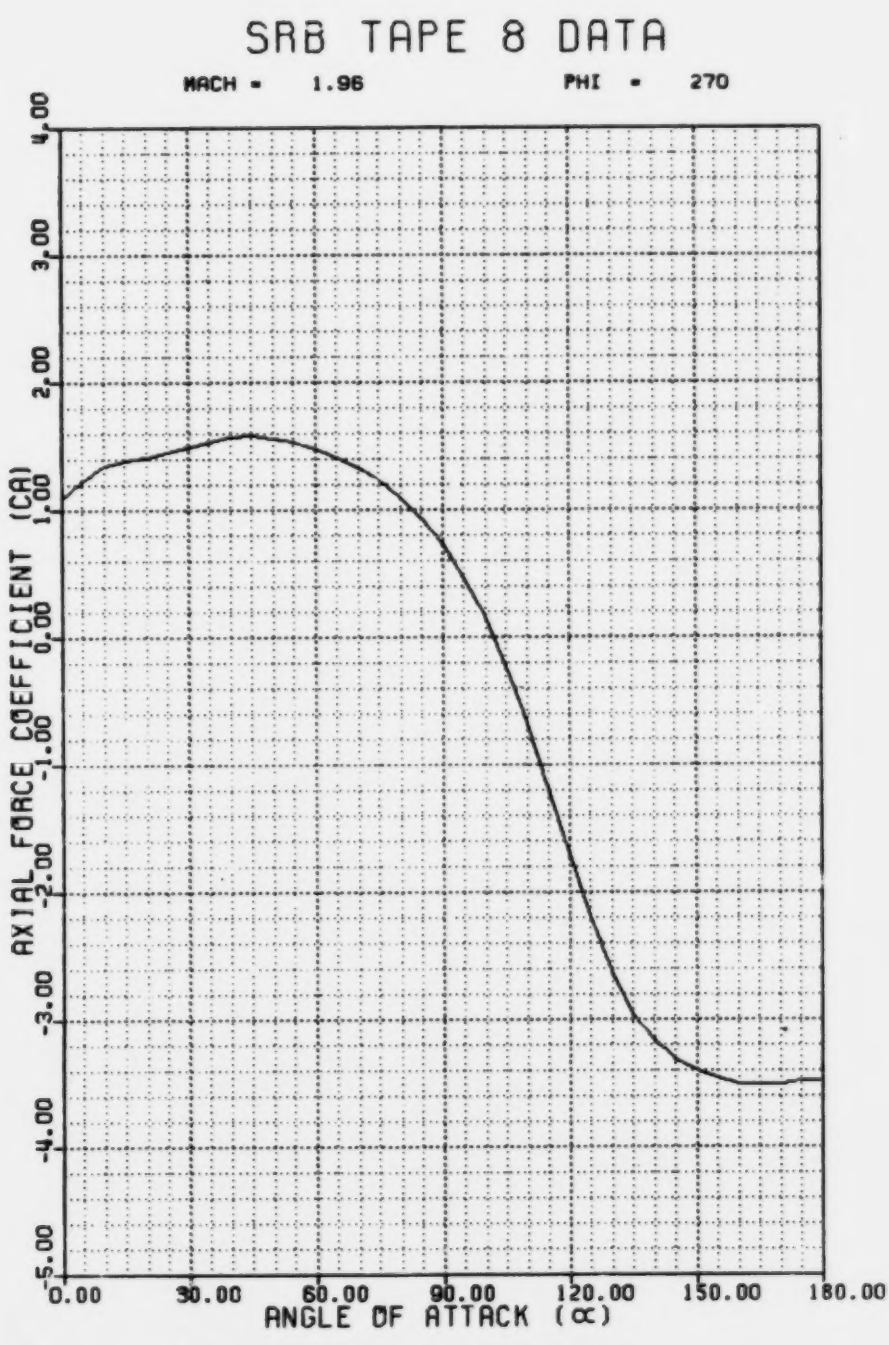
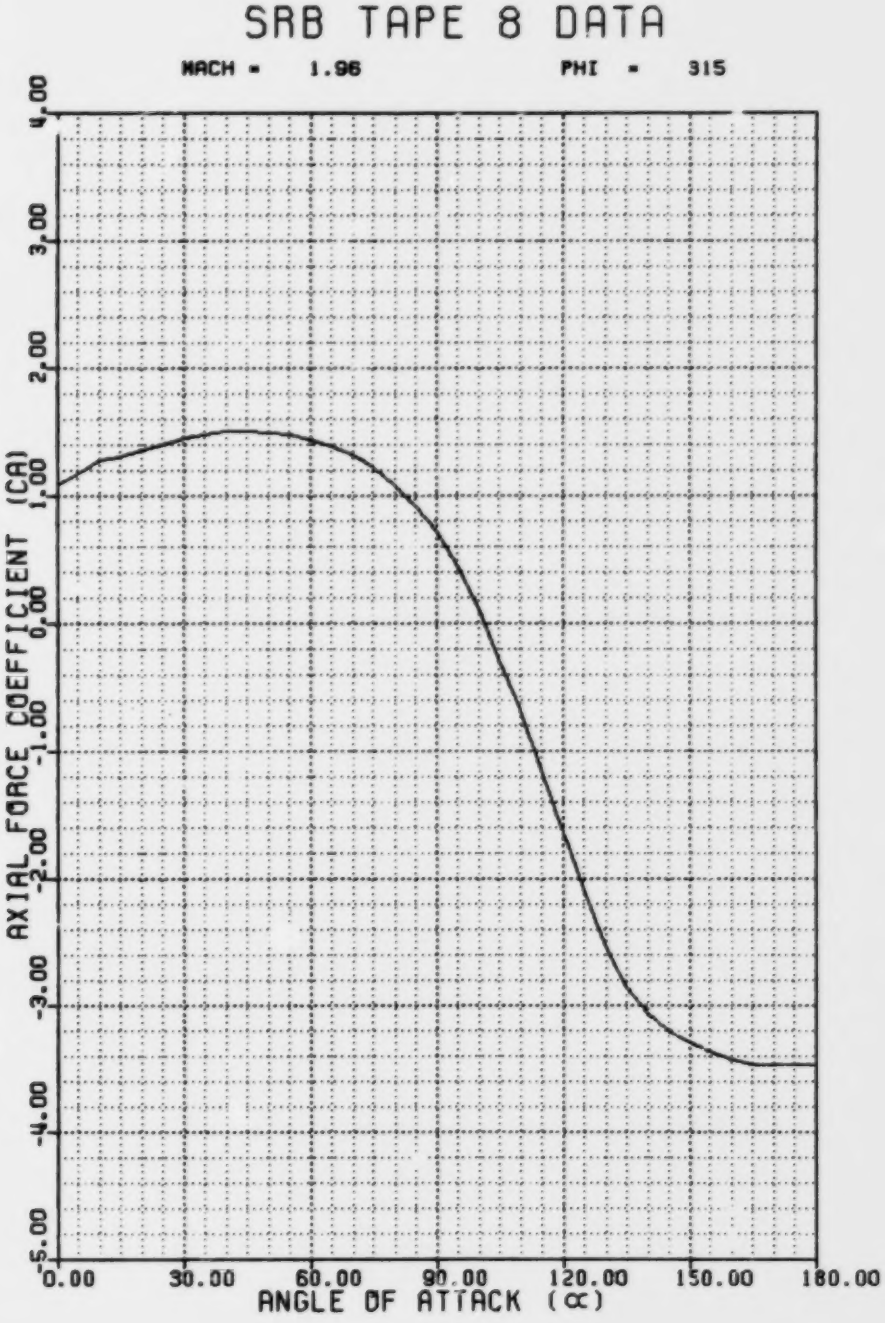
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.98
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

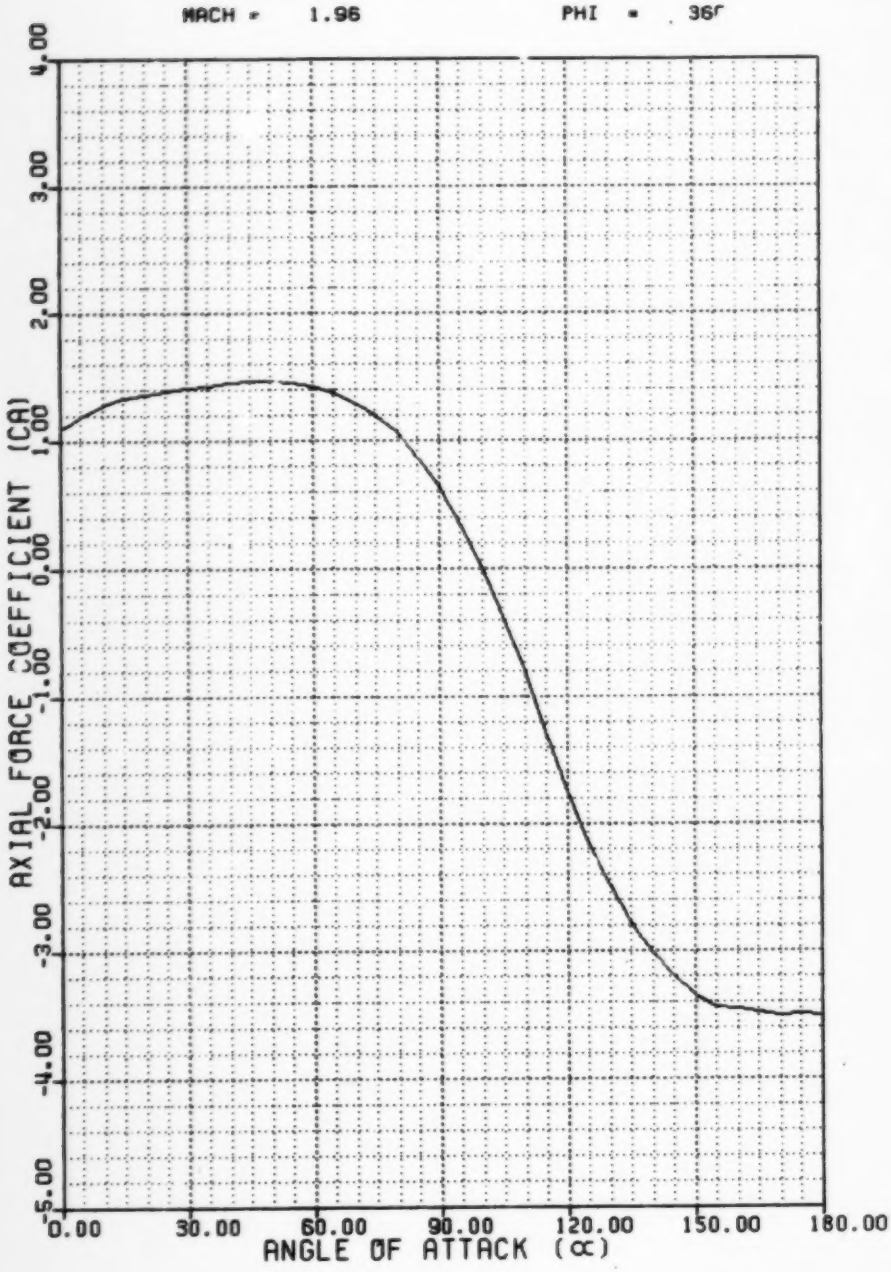

SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

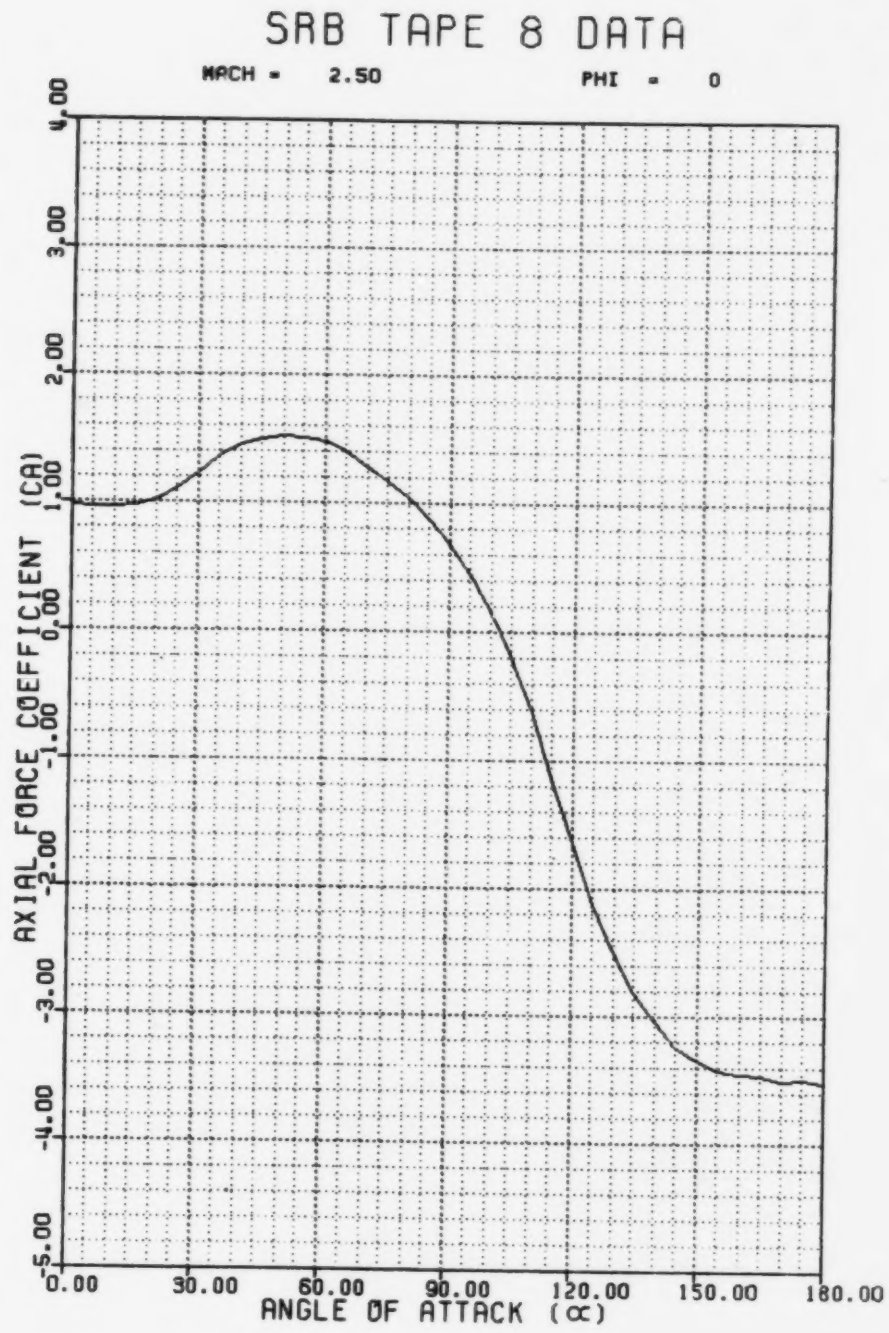

SRB TAPE 8 DATA
MACH = 1.96
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.96 PHI = 36°




SRB TAPE 8 DATA
MACH = 2.50
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
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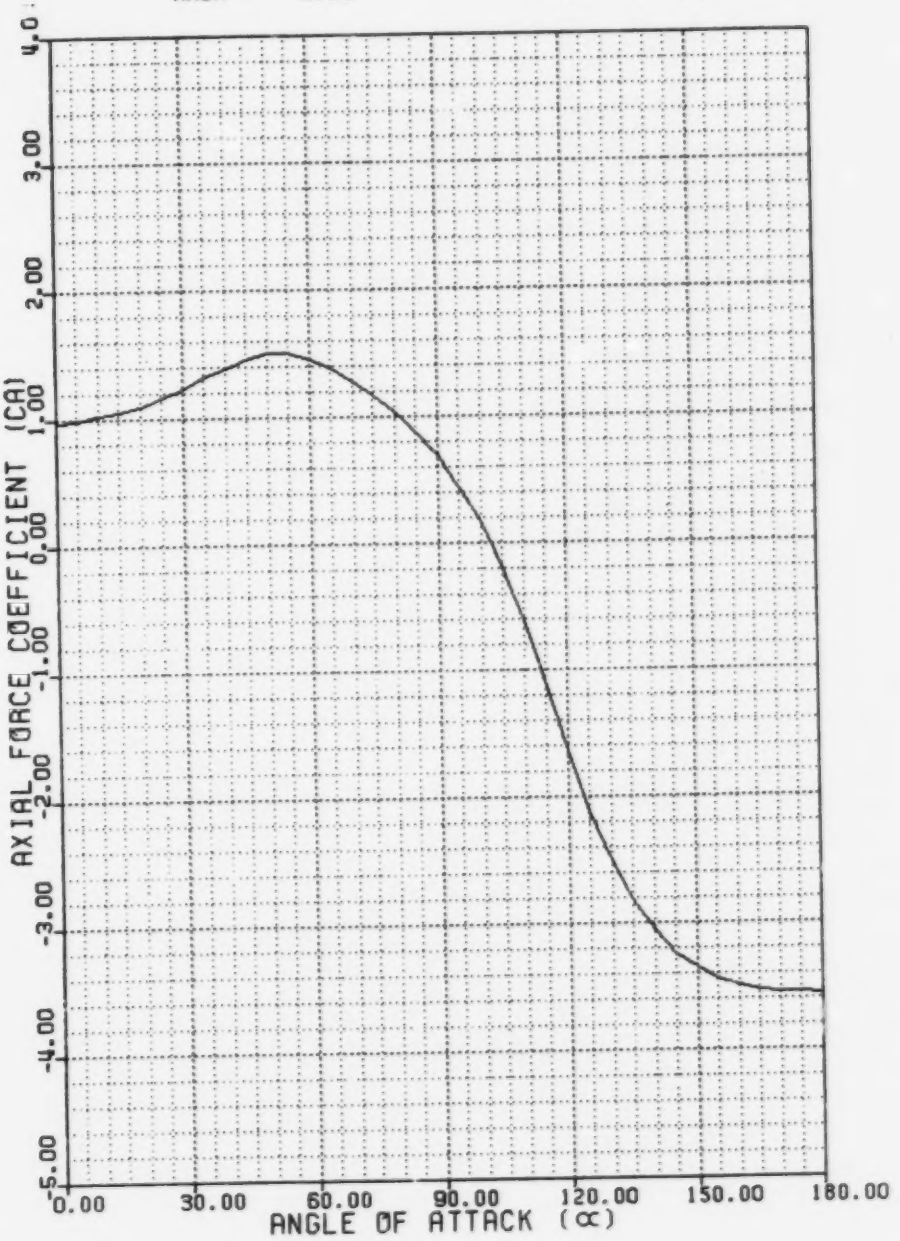
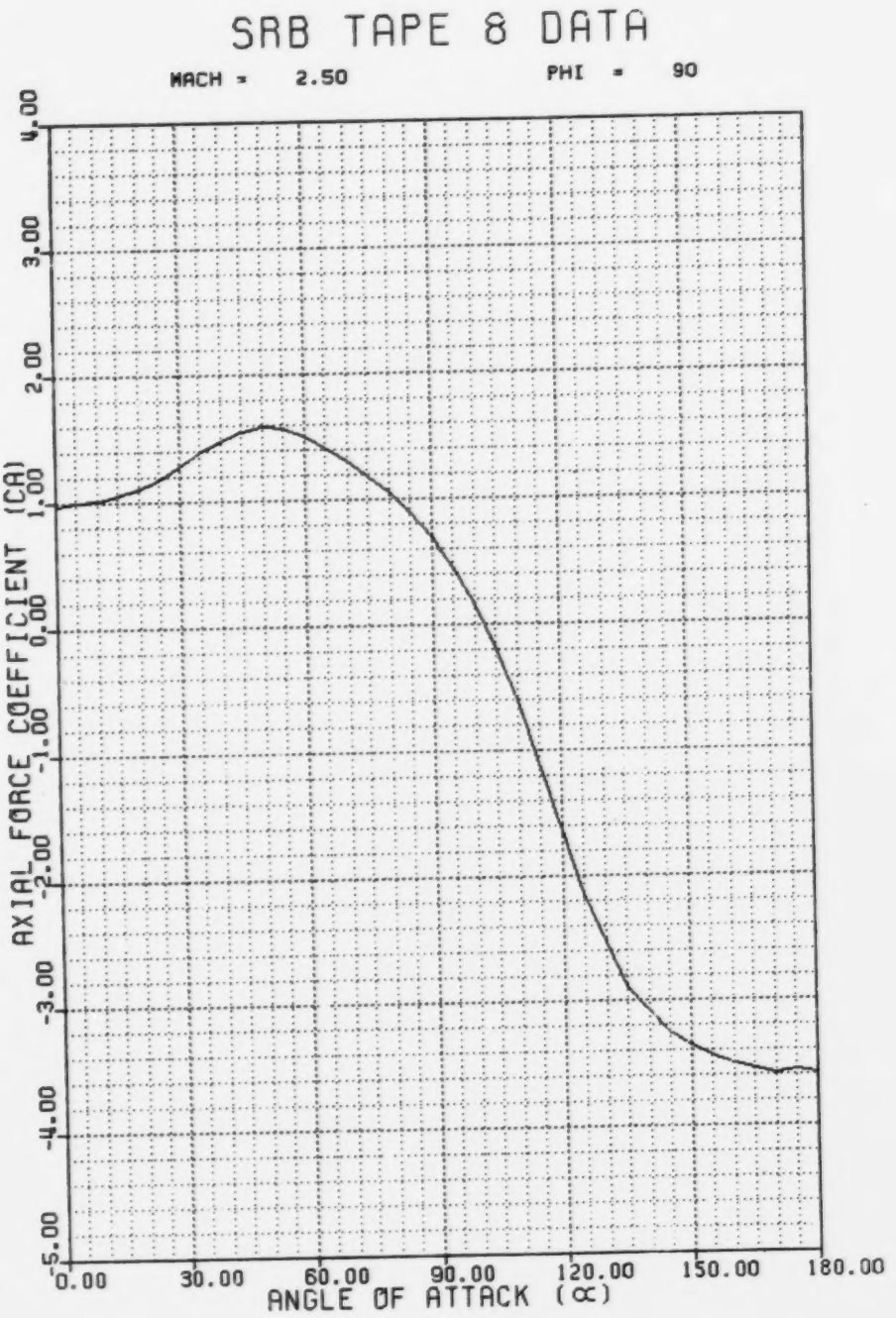
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE & DATA

MACH = 2.50 PHI = 45




SRB TAPE 8 DATA
MACH = 2.50
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
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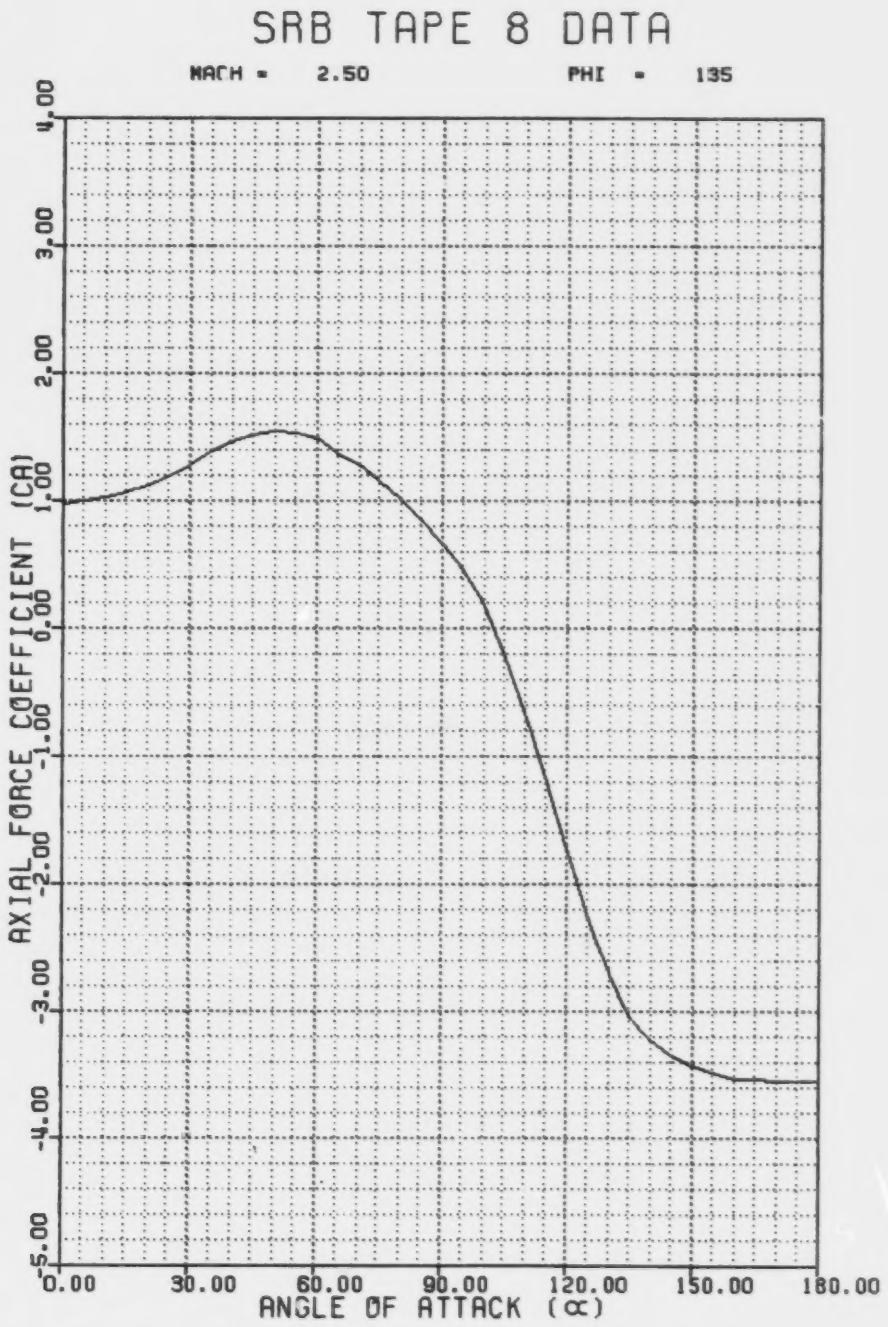
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-696


SRB TAPE 8 DATA
MACH = 2.50
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
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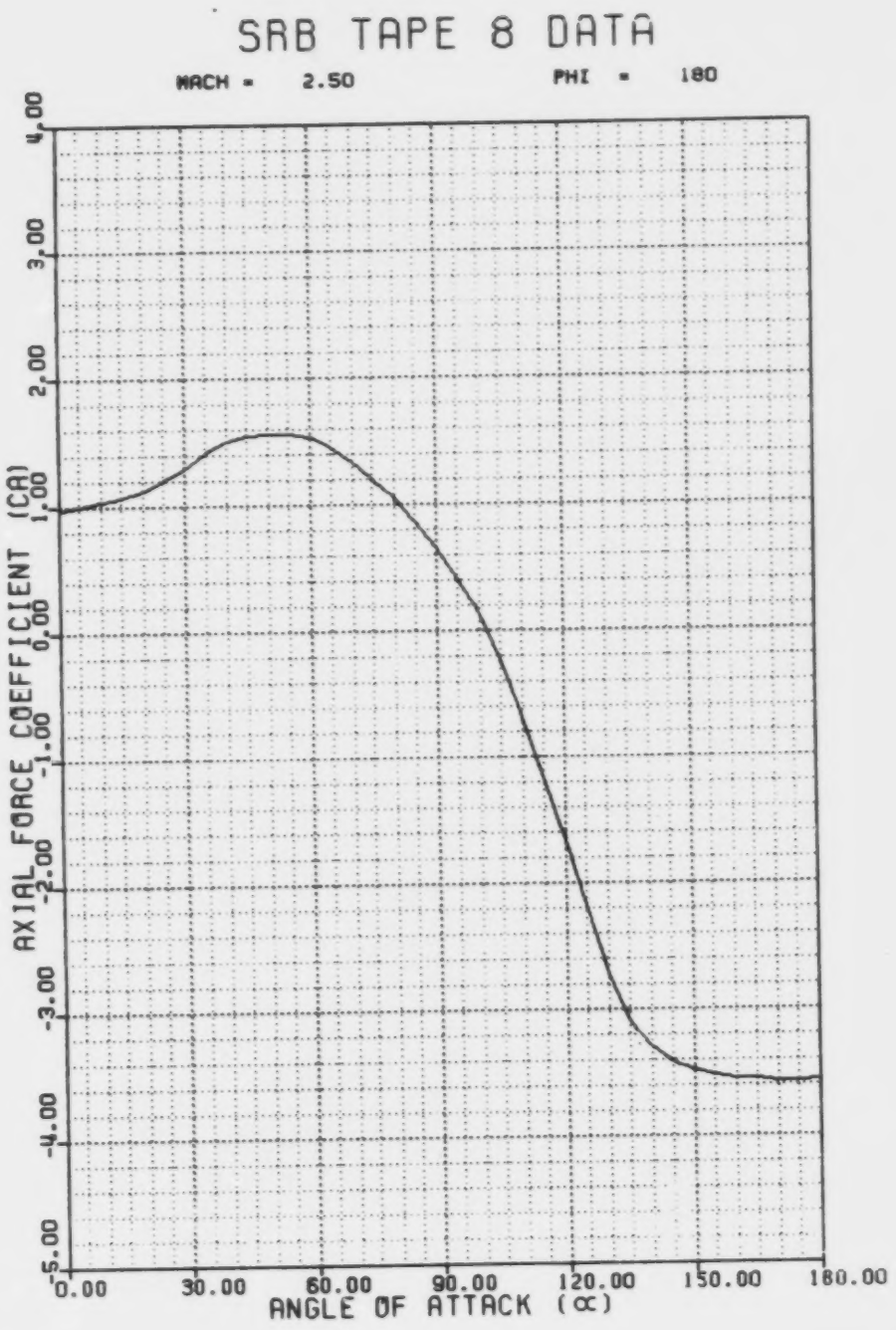
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
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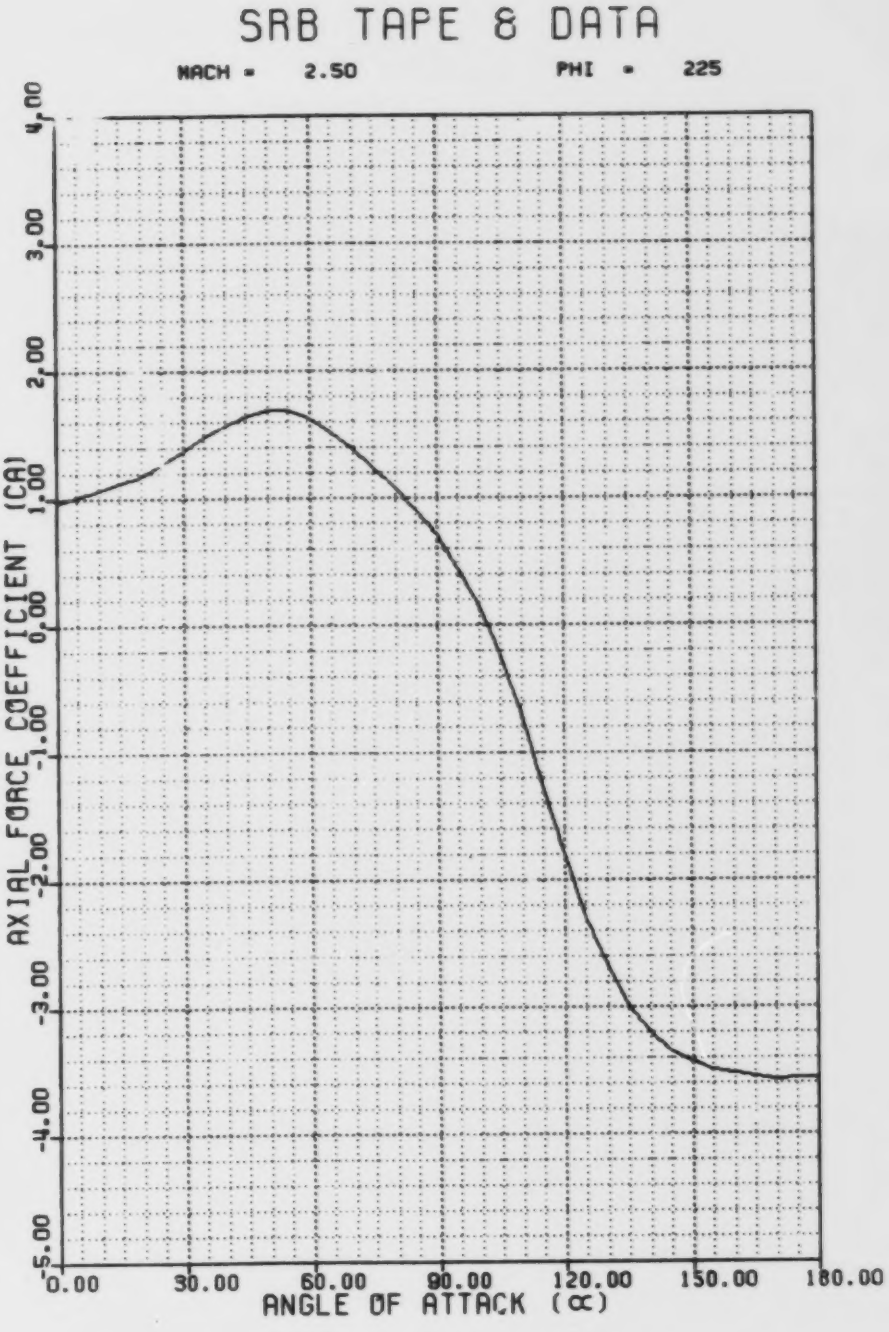
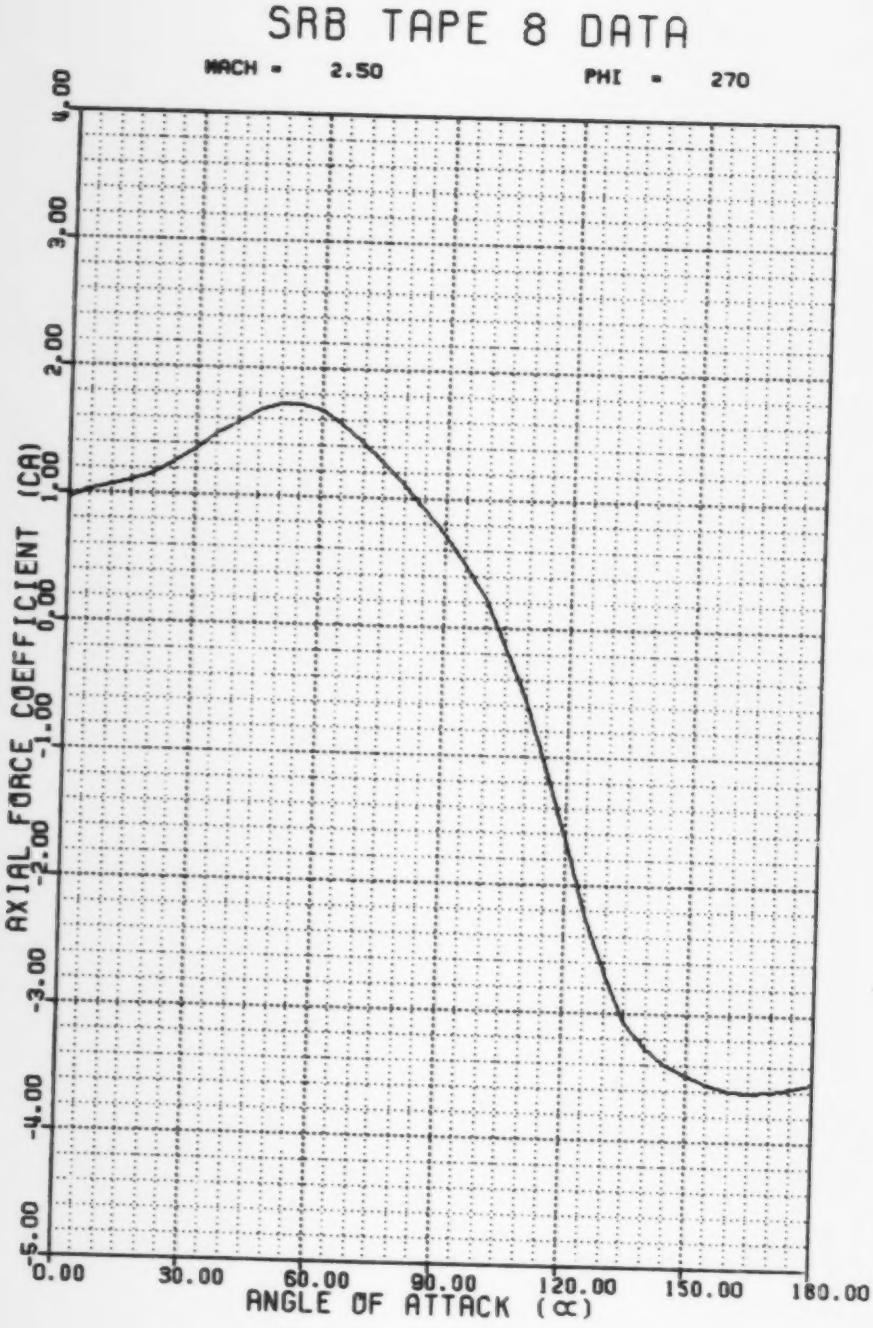
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-698


SRB TAPE & DATA
MACH = 2.50
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
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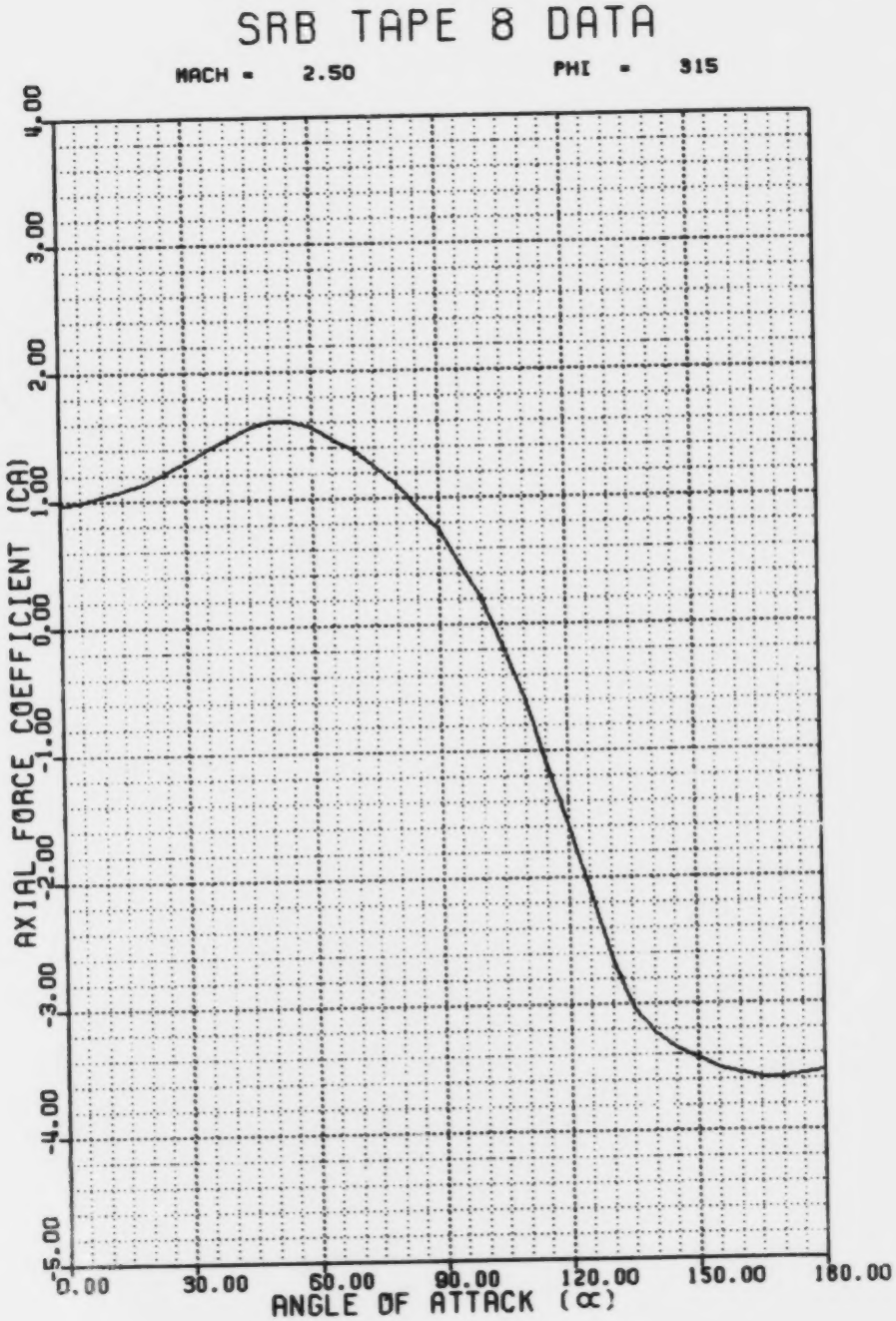
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
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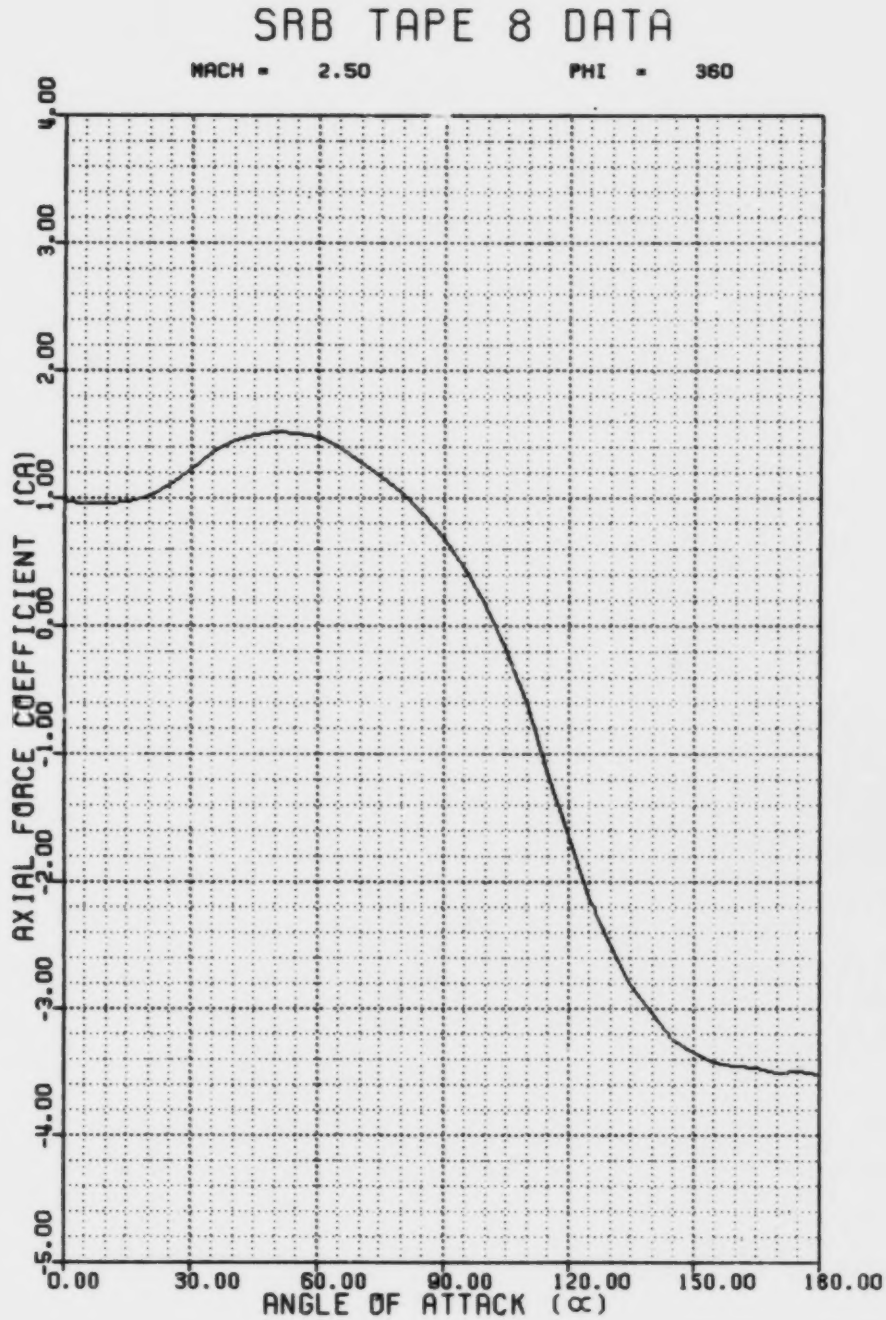
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
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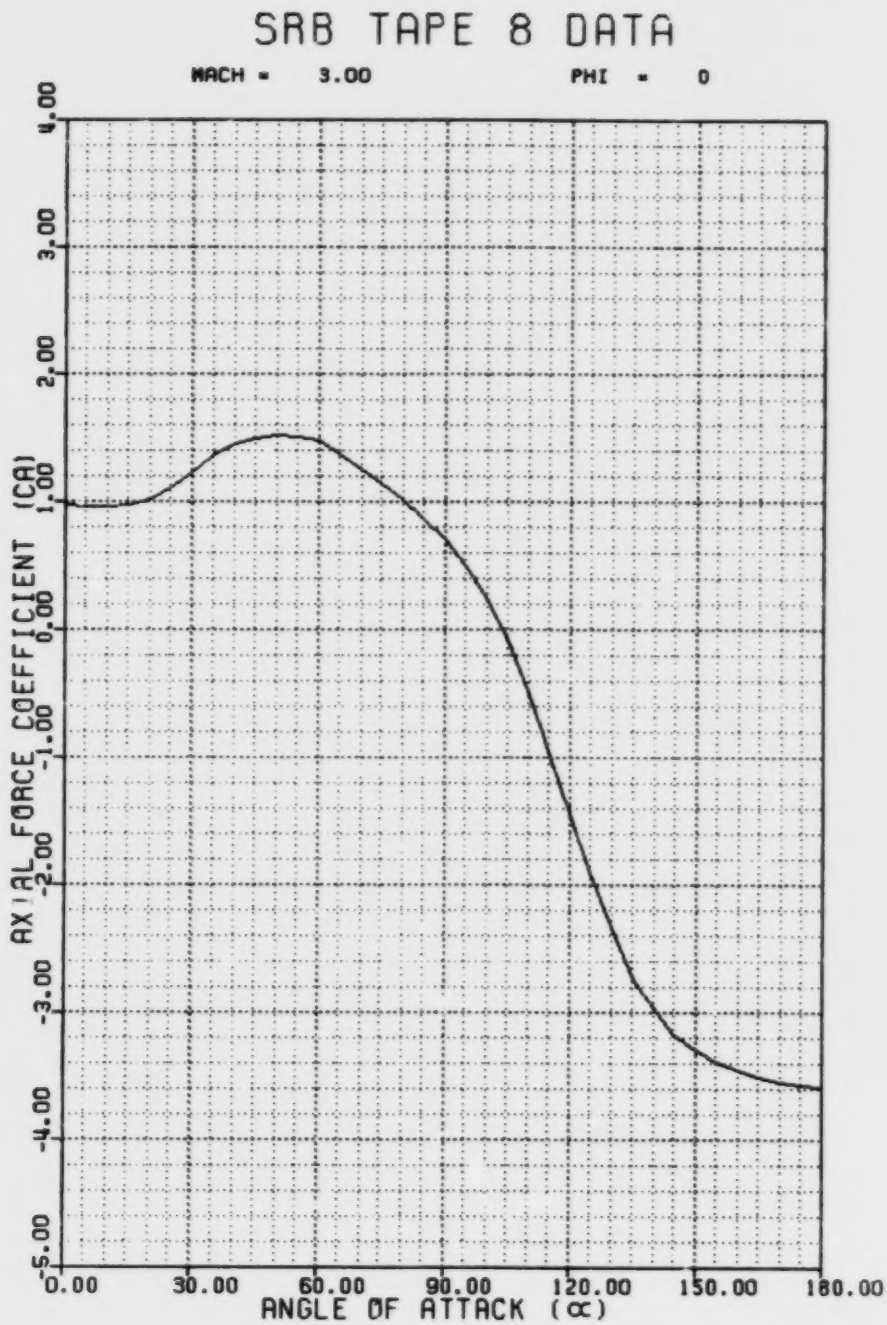
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 0
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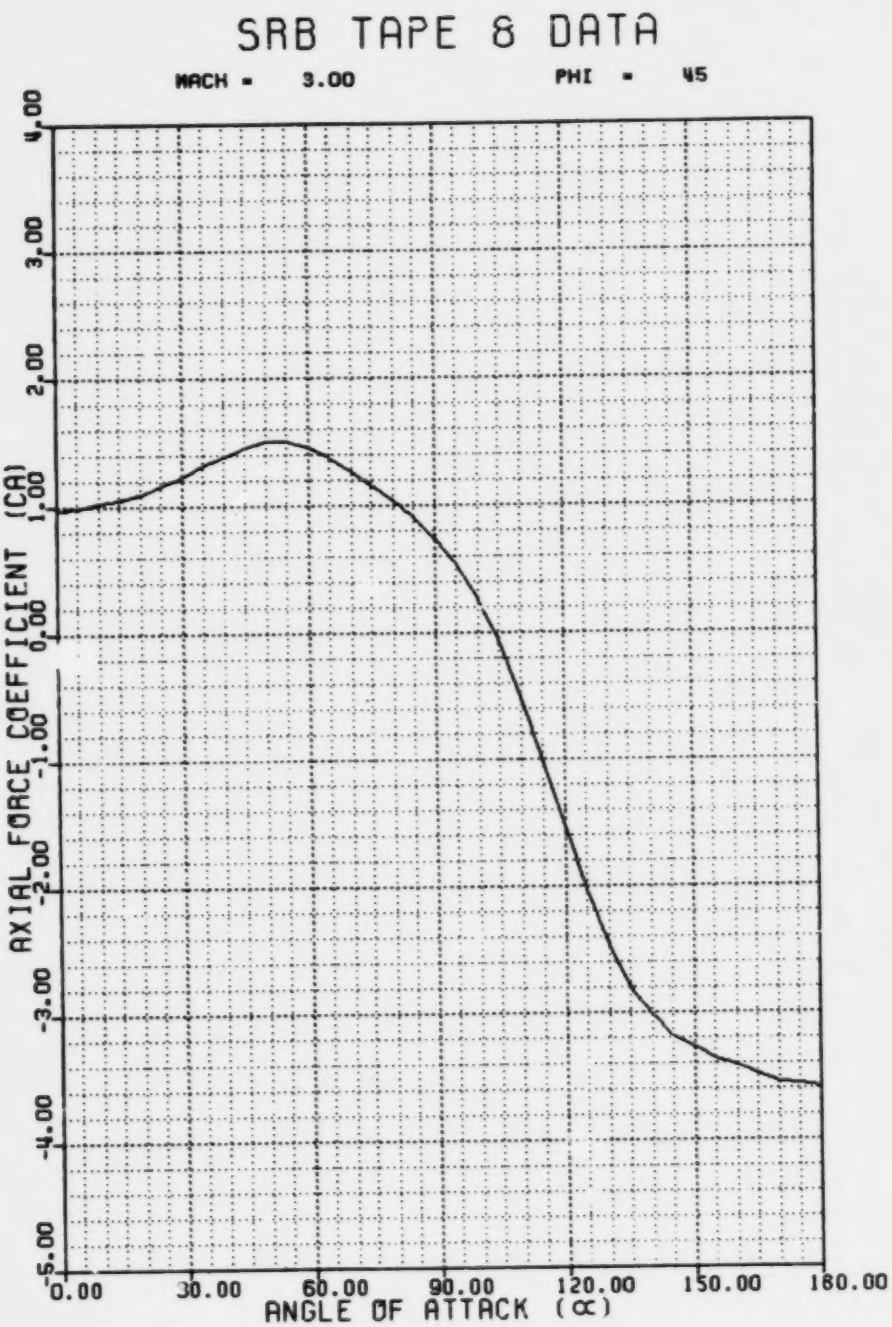
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
MACH = 3.00
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
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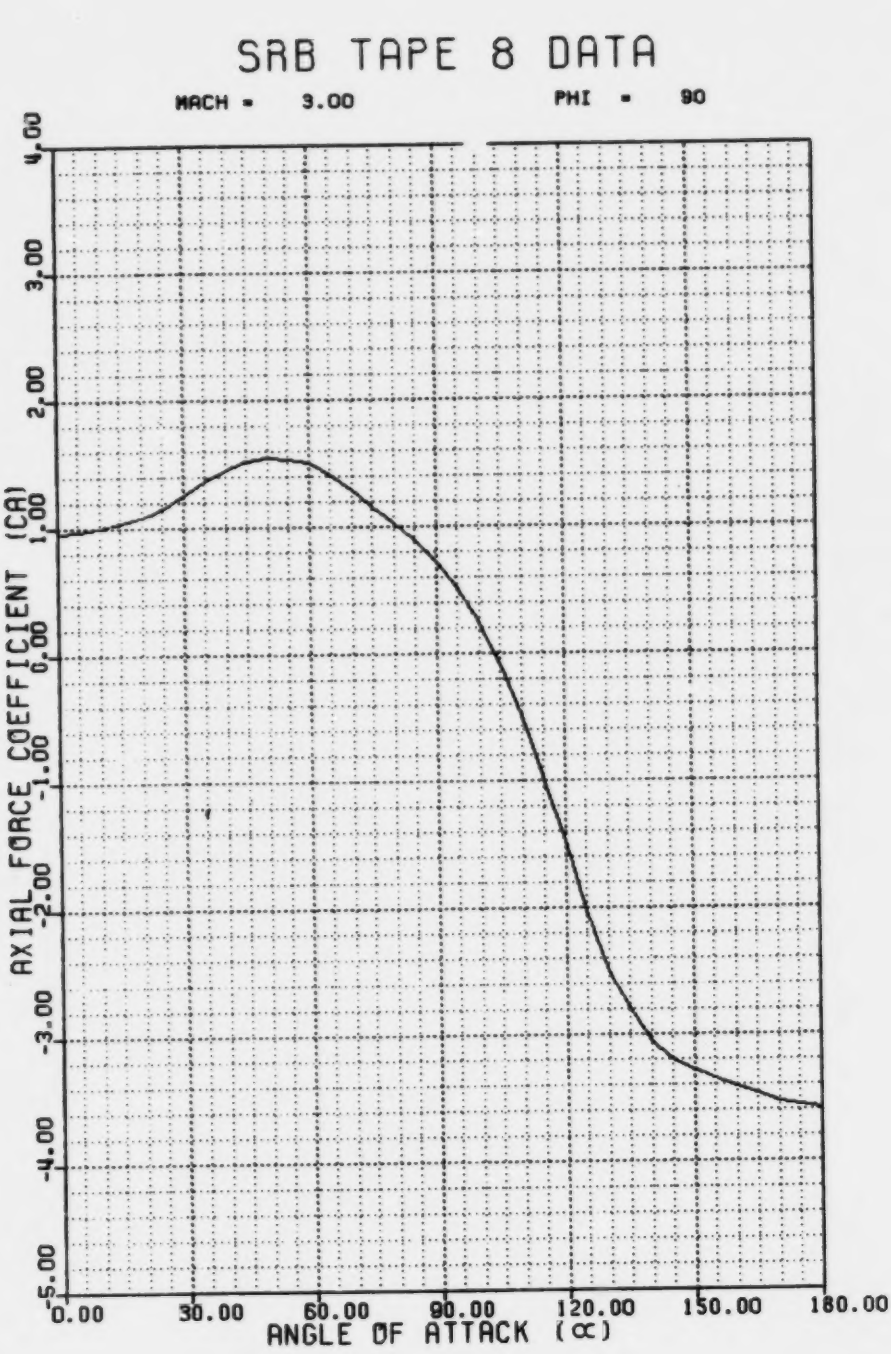
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 90
AXIAL FORCE COEFFICIENT (CA)
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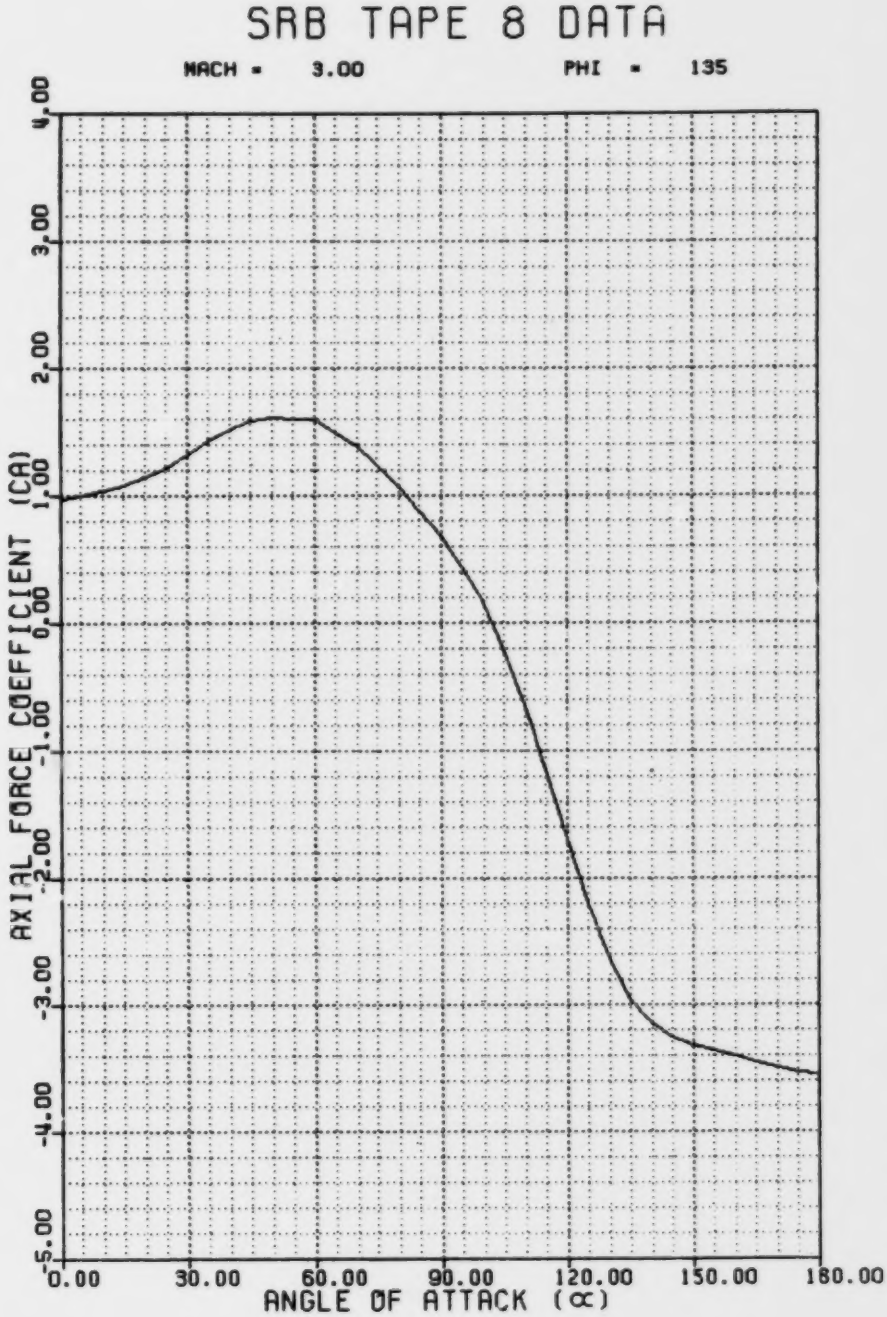
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 135
AXIAL FORCE COEFFICIENT (CA)
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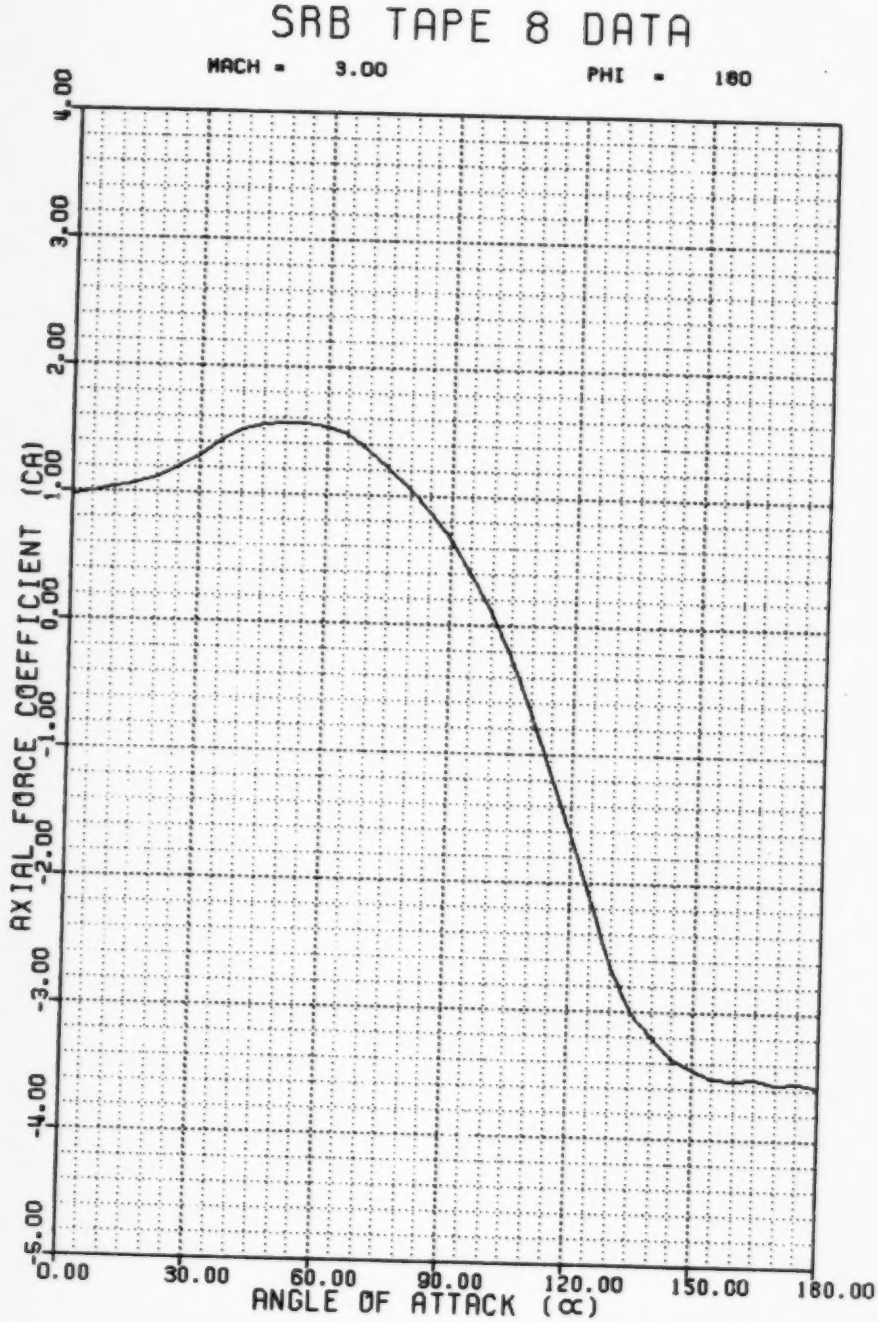
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 180
AXIAL FORCE COEFFICIENT (CA)
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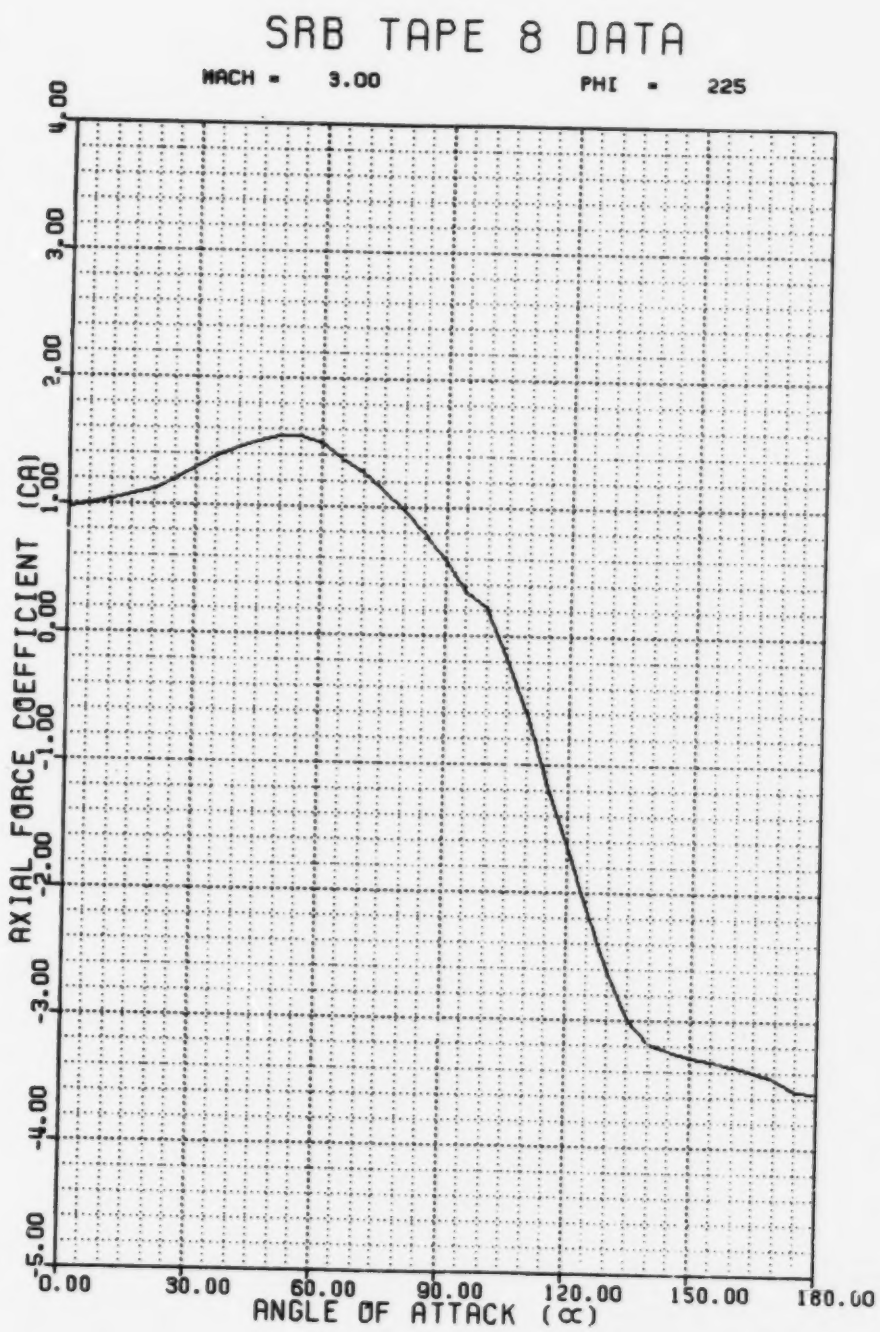
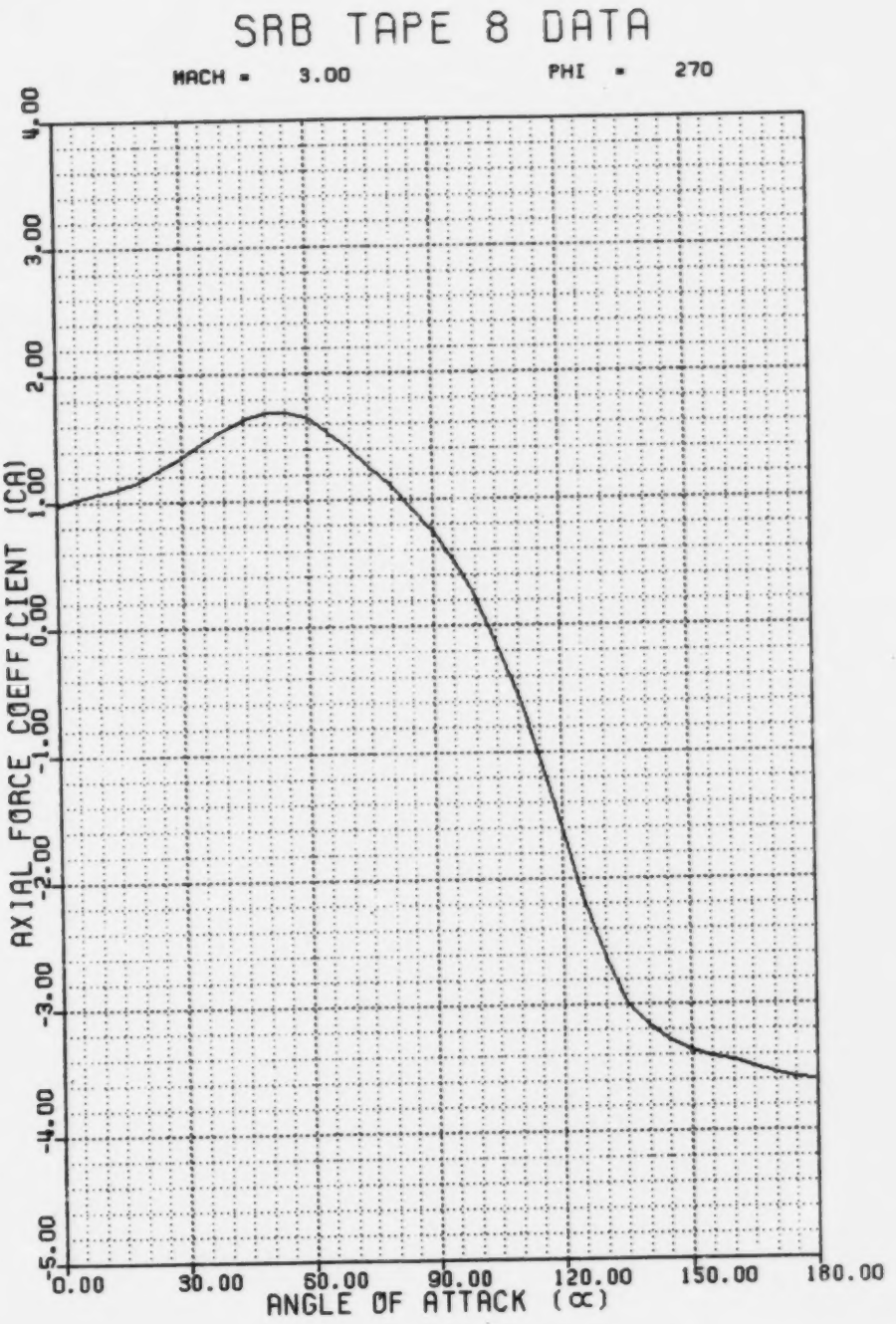
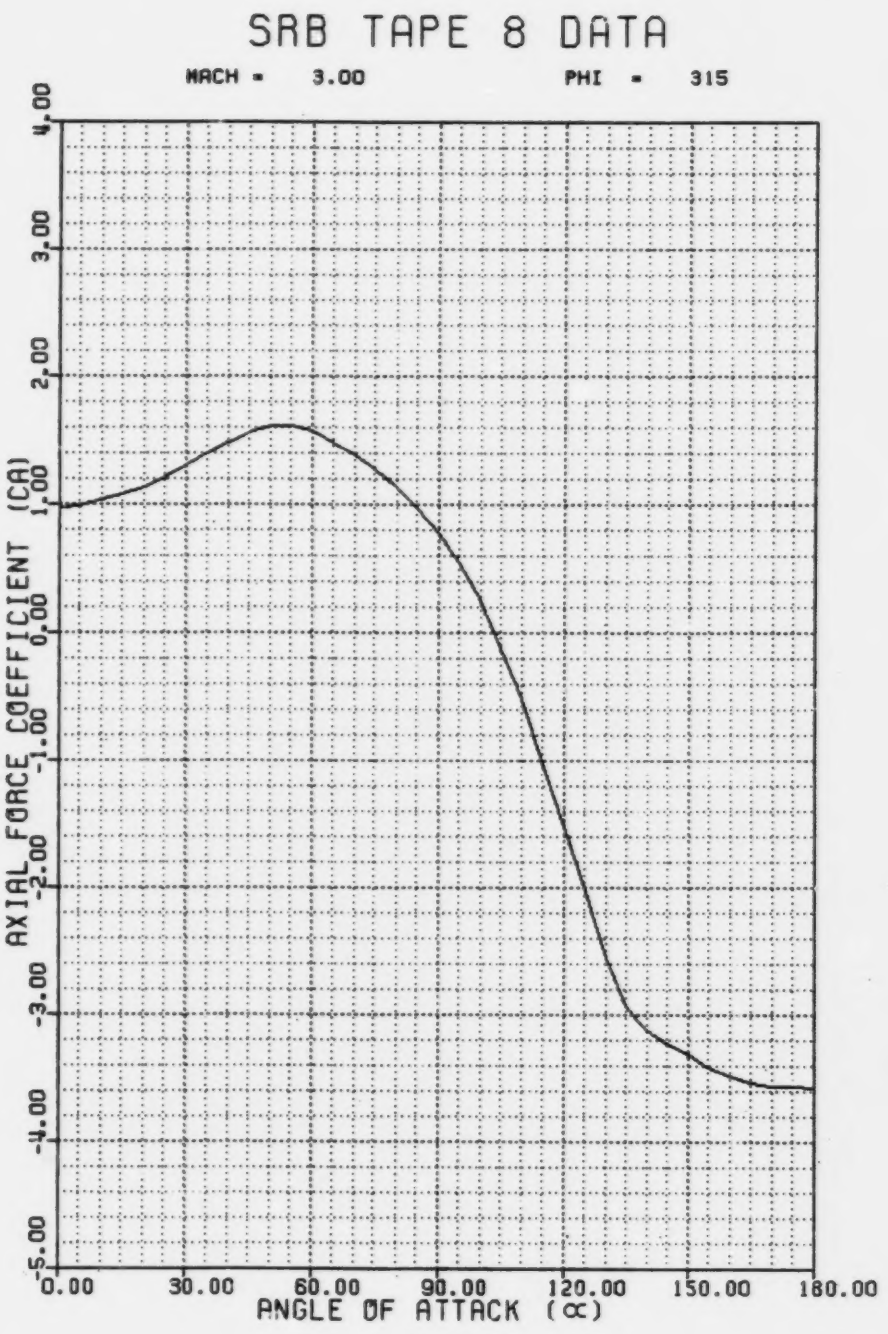
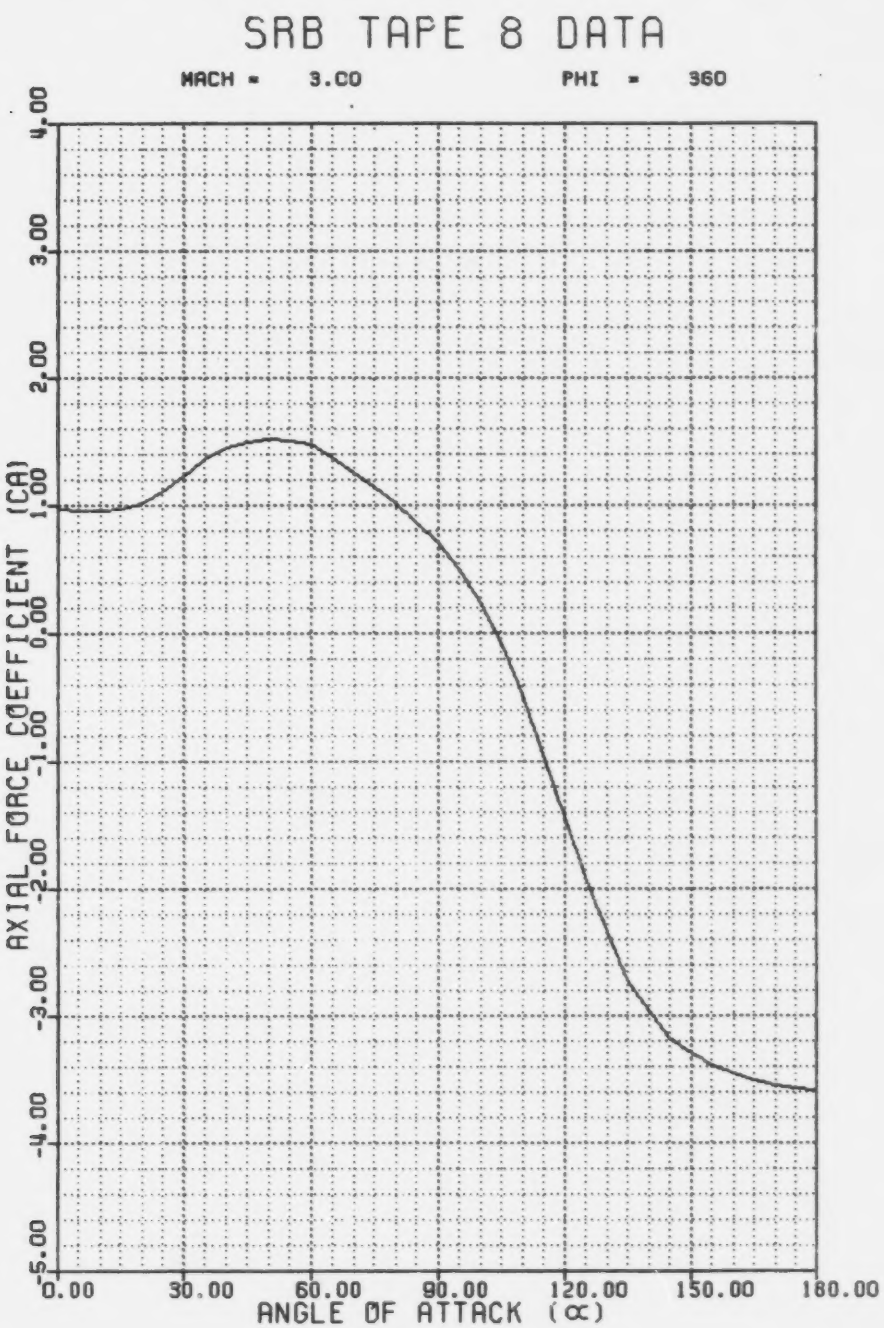
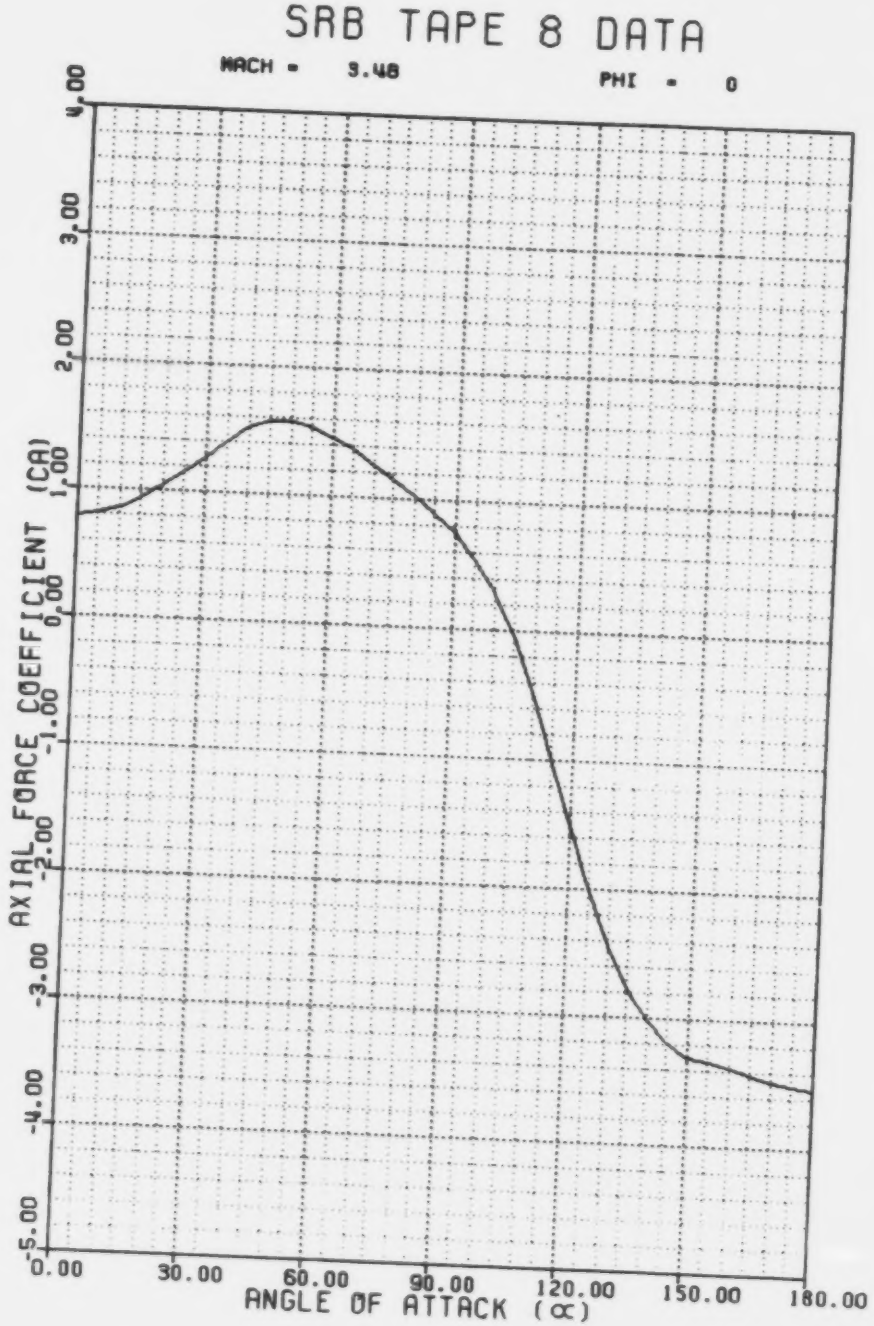
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 225
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 270
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 315
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 360
AXIAL FORCE COEFFICIENT (CA)
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 0
AXIAL FORCE COEFFICIENT (CA)
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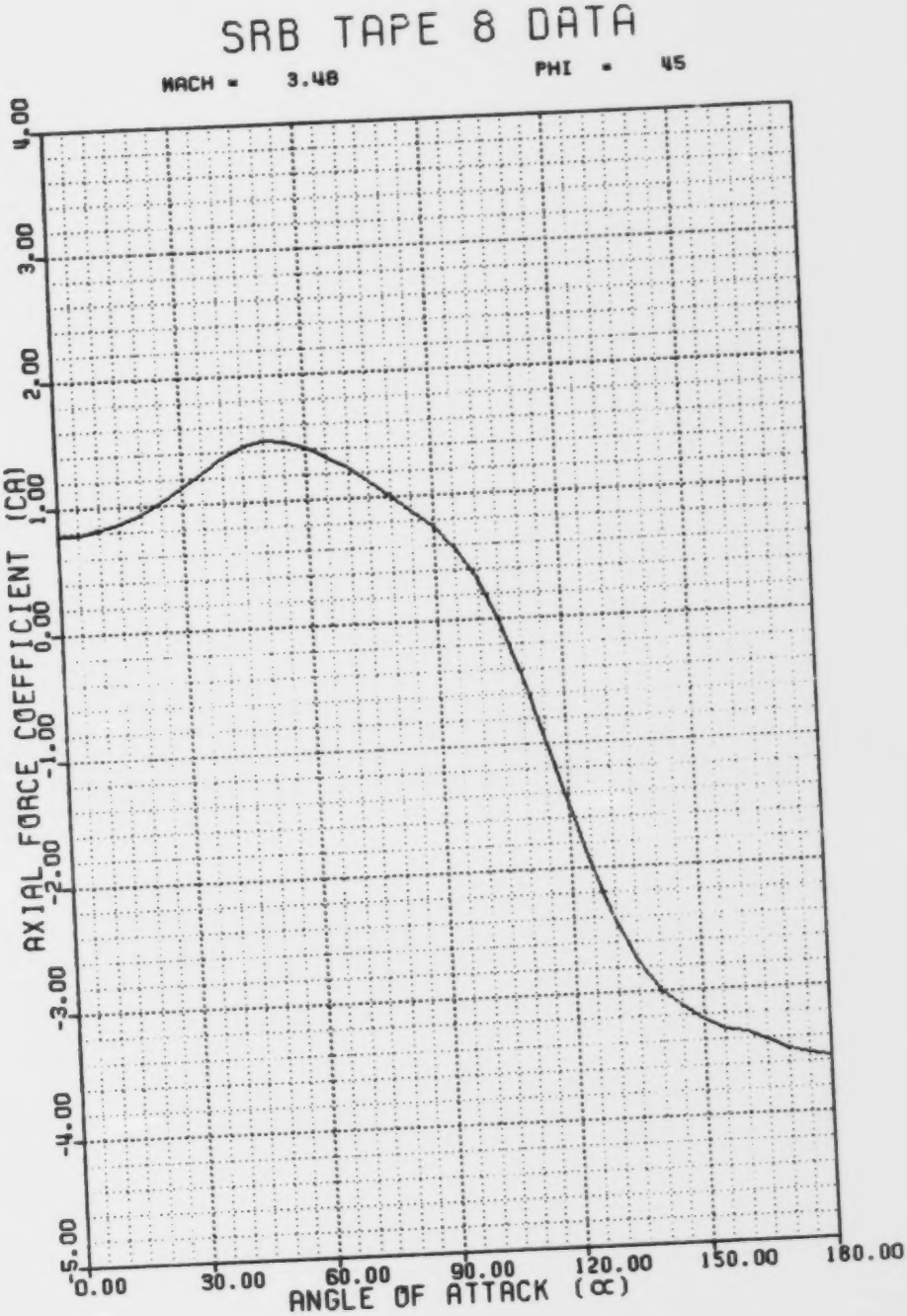
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 45
AXIAL FORCE COEFFICIENT (CA)
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2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
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0.00
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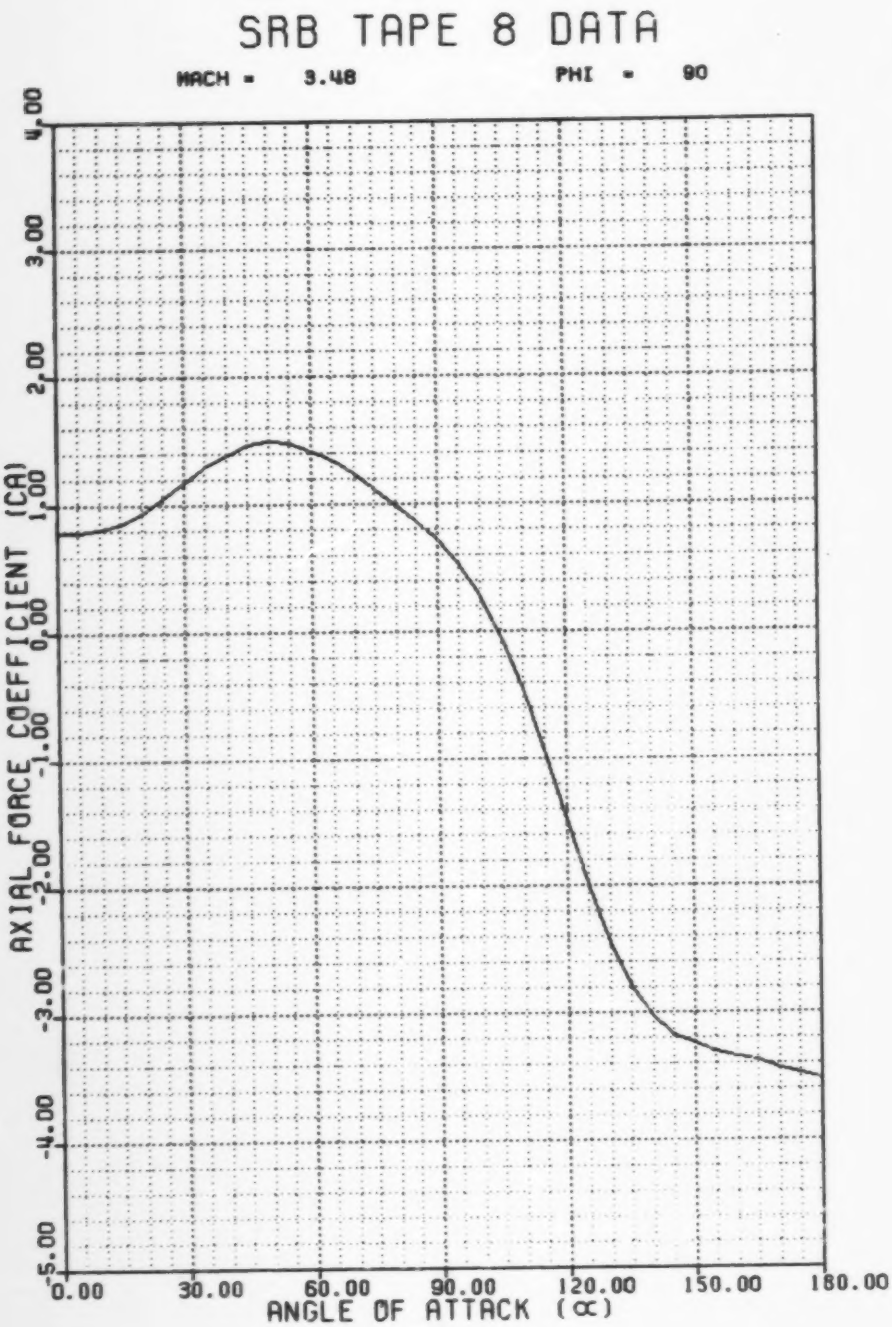
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-1.00
-2.00
-3.00
-4.00
-5.00
0.00
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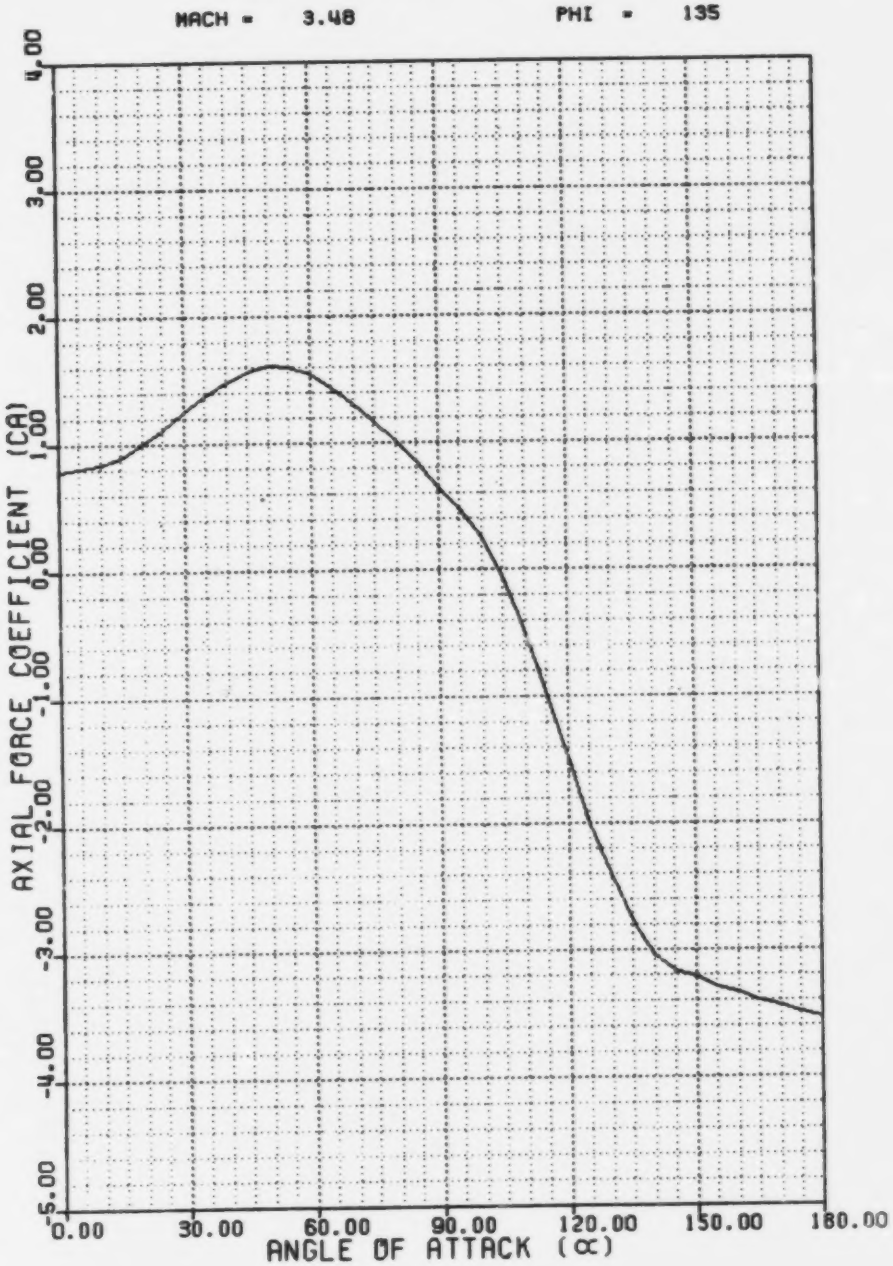
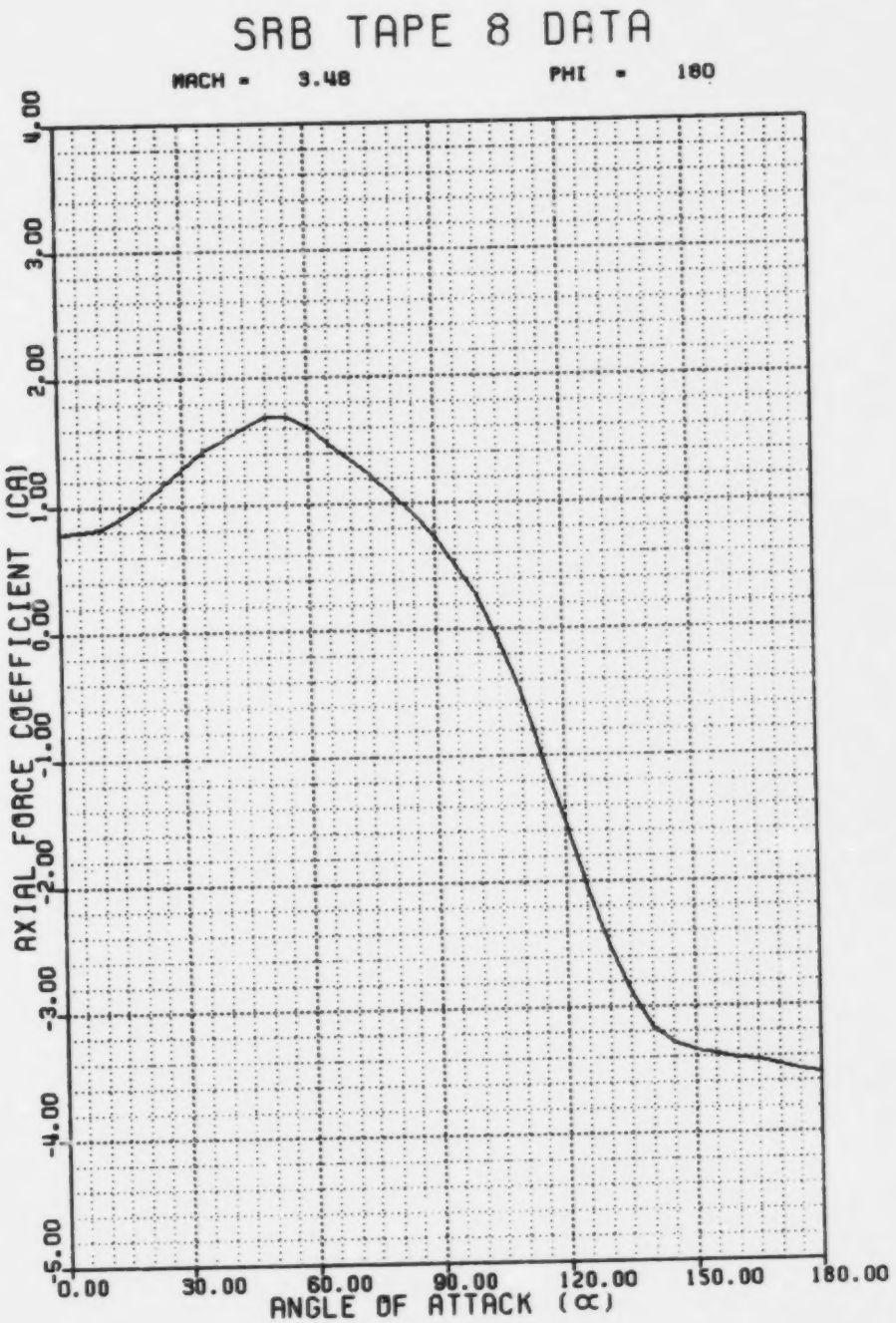
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 3.48 PHI = 135

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PHI = 180
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0.00
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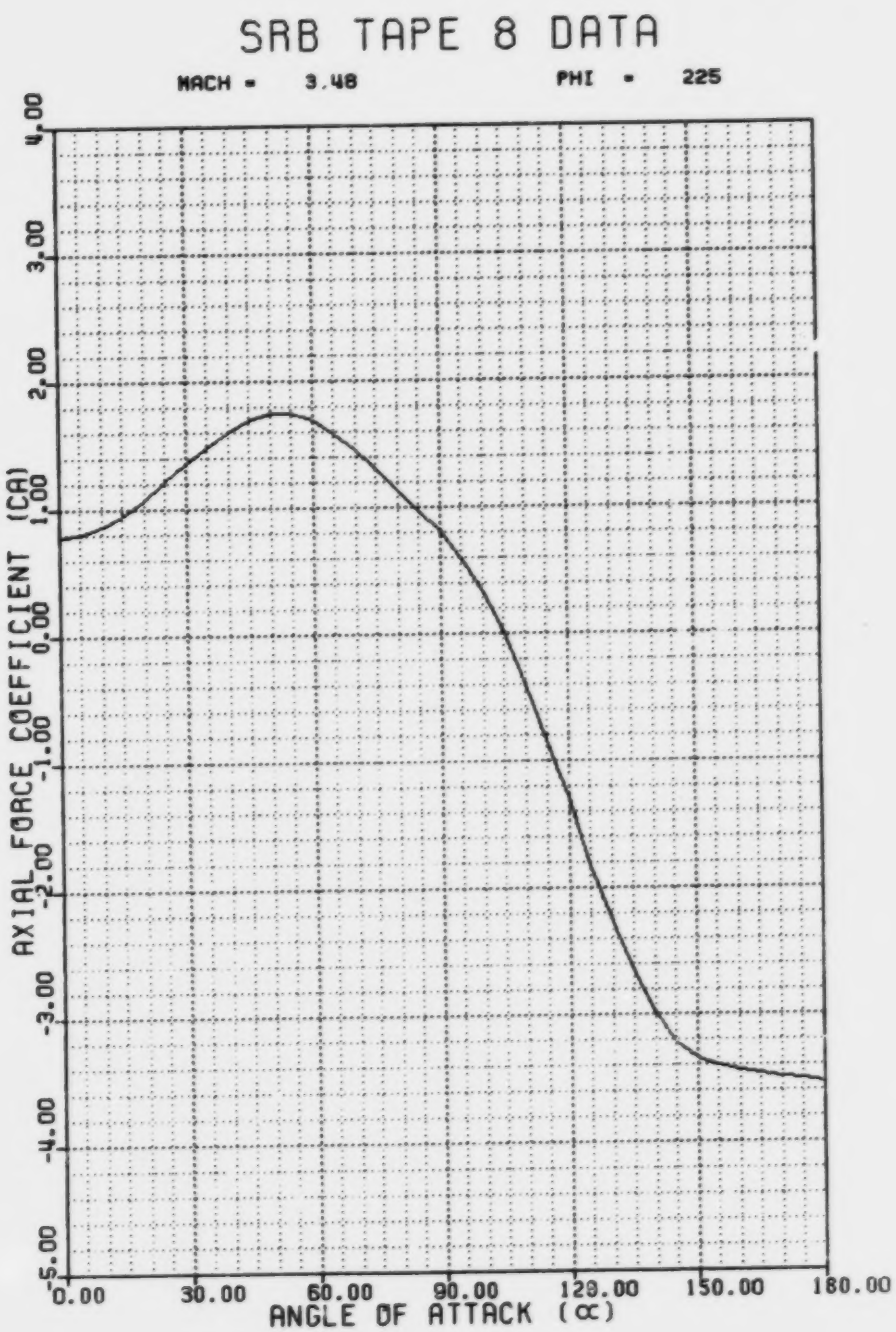
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 225
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0.00
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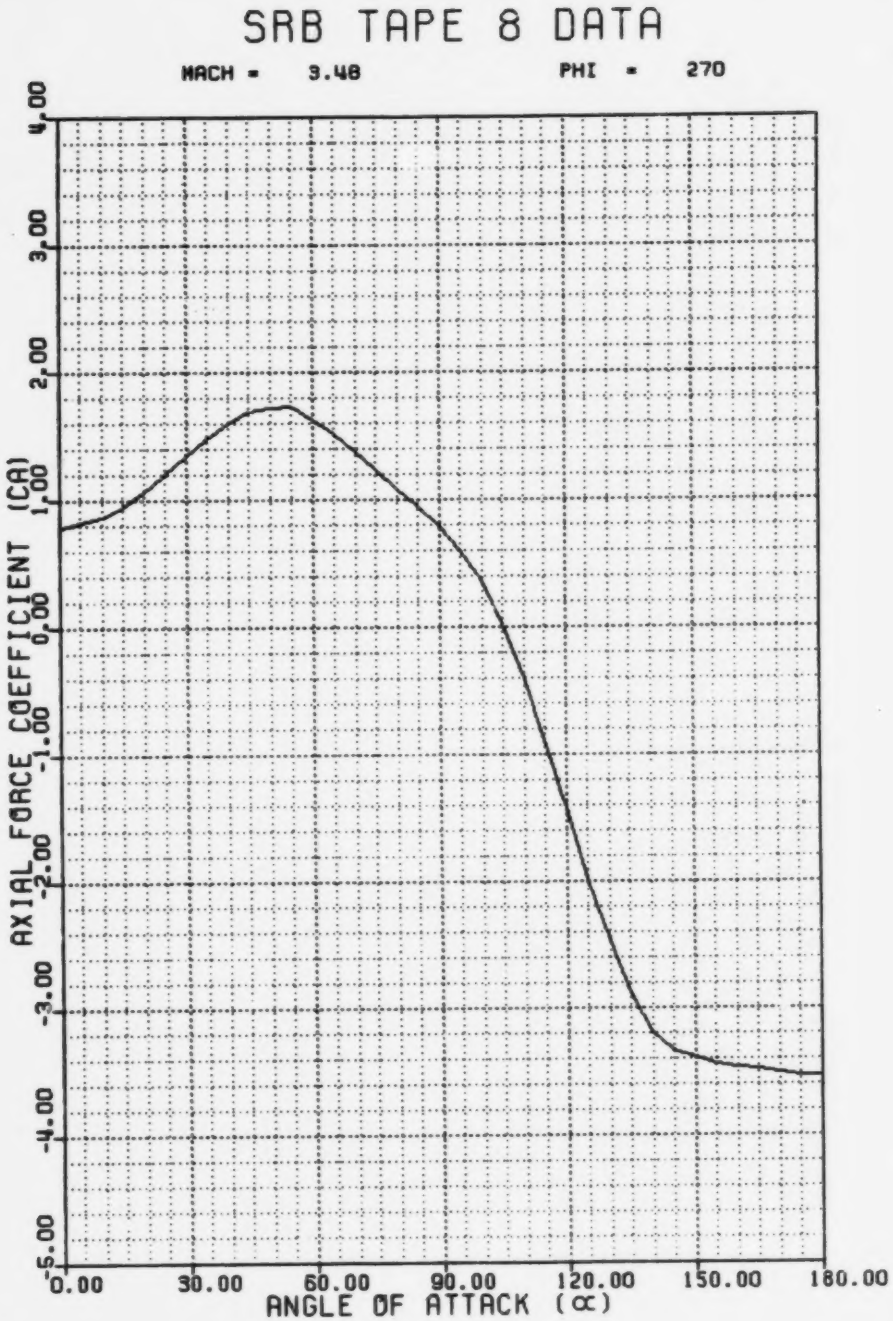
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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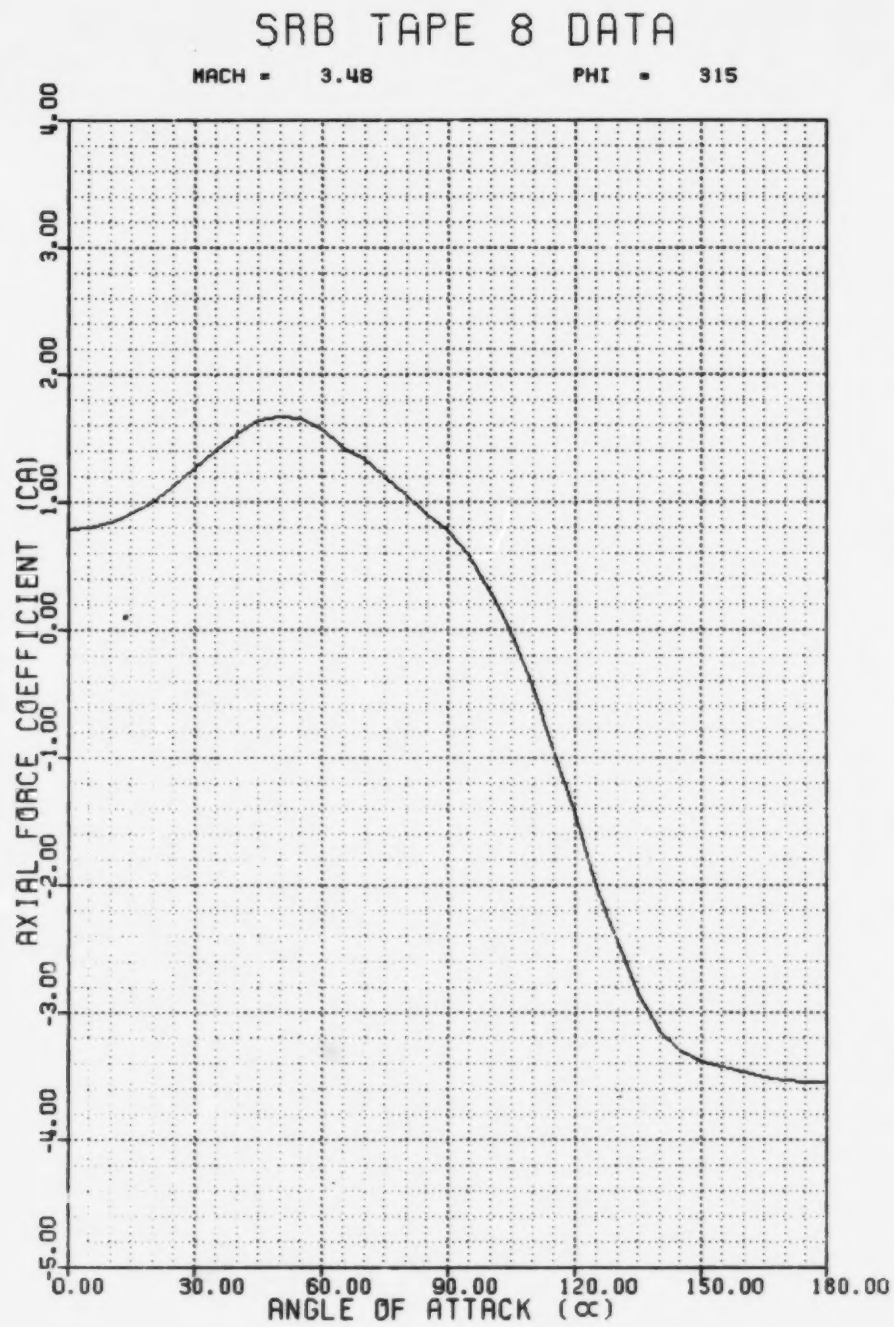
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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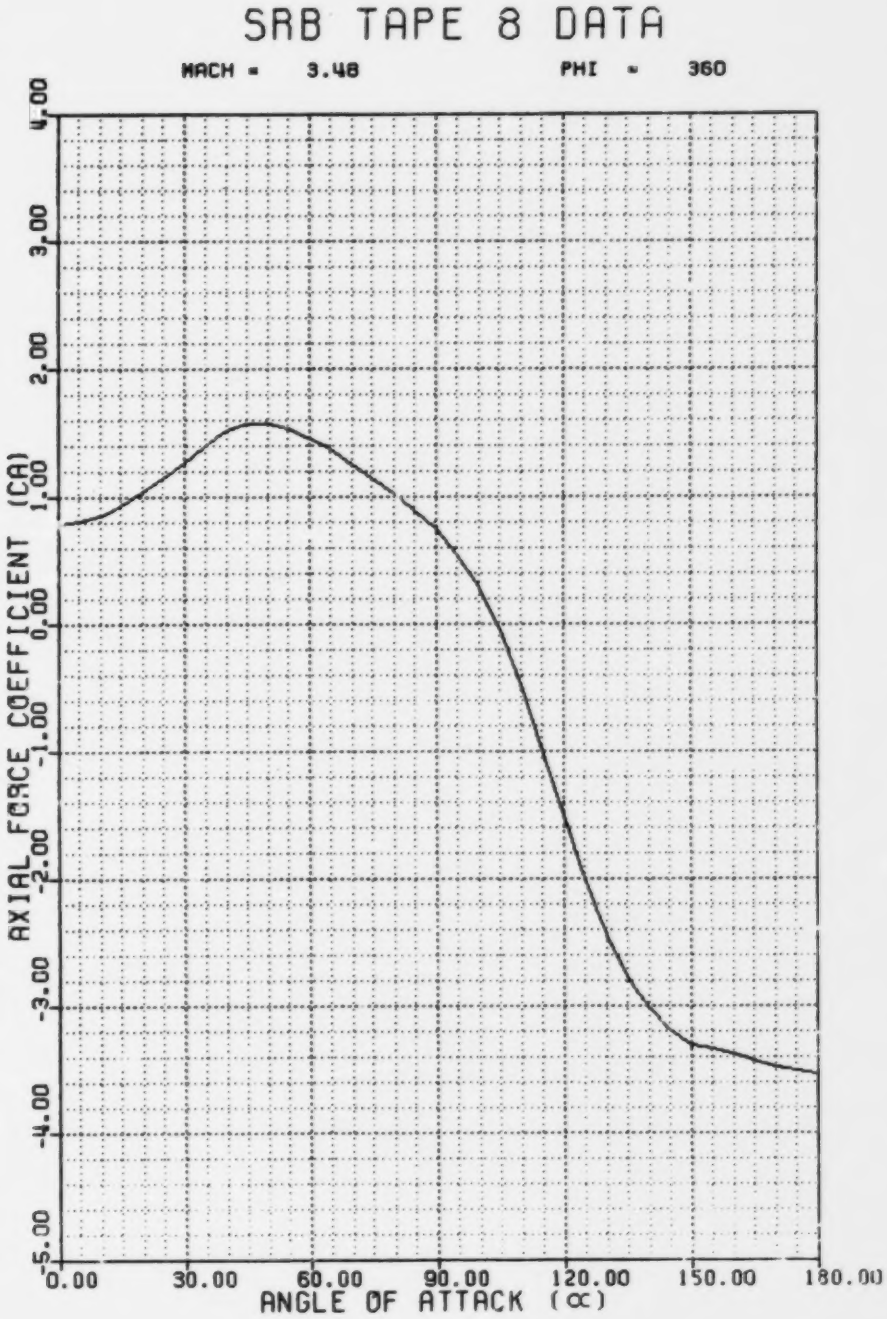
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 360
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2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

ROLLING MOMENT (CR)

Mach Number	Page
0.4	B-721
0.5	B-730
0.55	B-739
0.6	B-748
0.7	B-757
0.8	B-766
0.9	B-775
0.95	B-784
1.05	B-793
1.1	B-802
1.2	B-811
1.4	B-820
1.96	B-829
2.5	B-838
3.0	B-847
3.48	B-856

SRB TAPE 8 DATA

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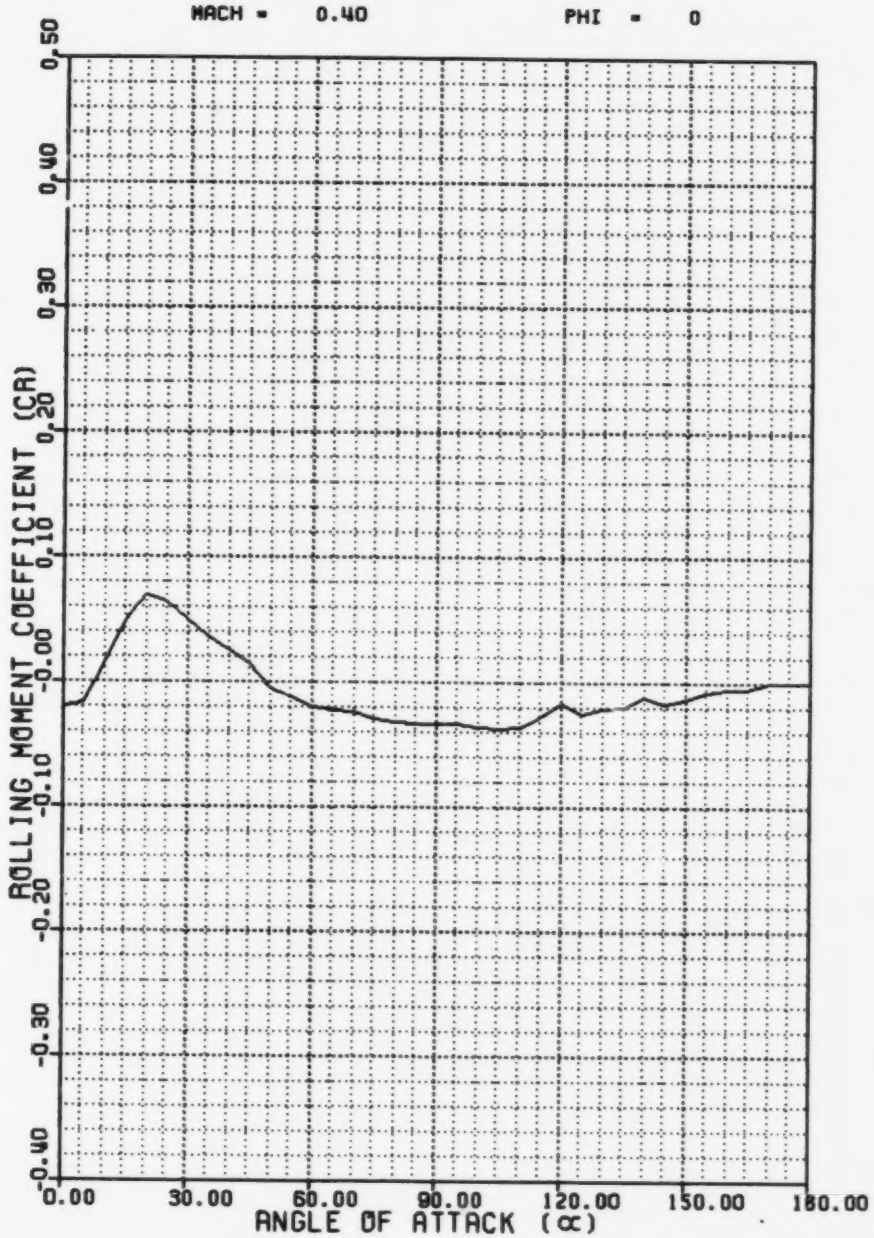

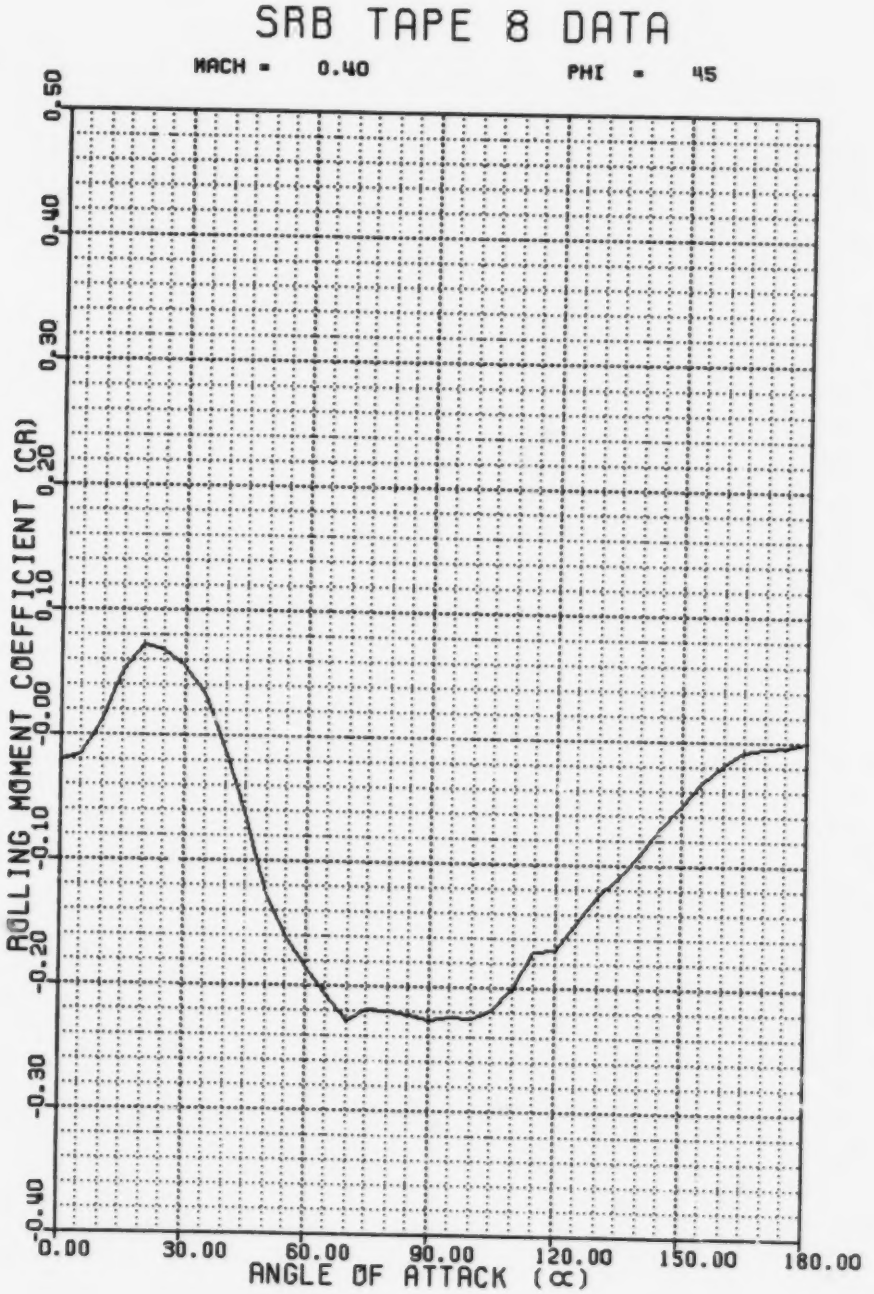
SRB TAPE 8 DATA
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0.30
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-0.10
-0.20
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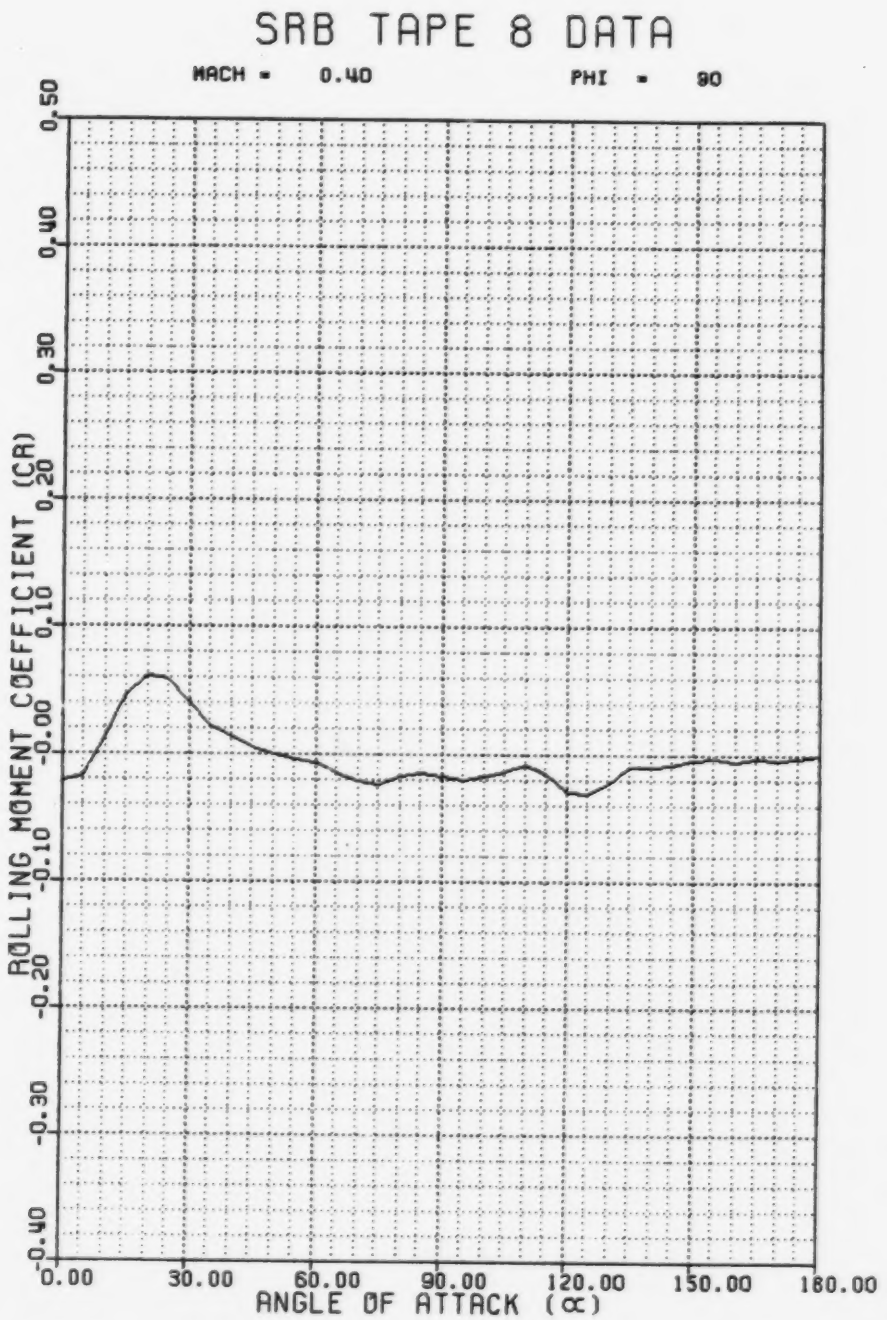
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-722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-0.10
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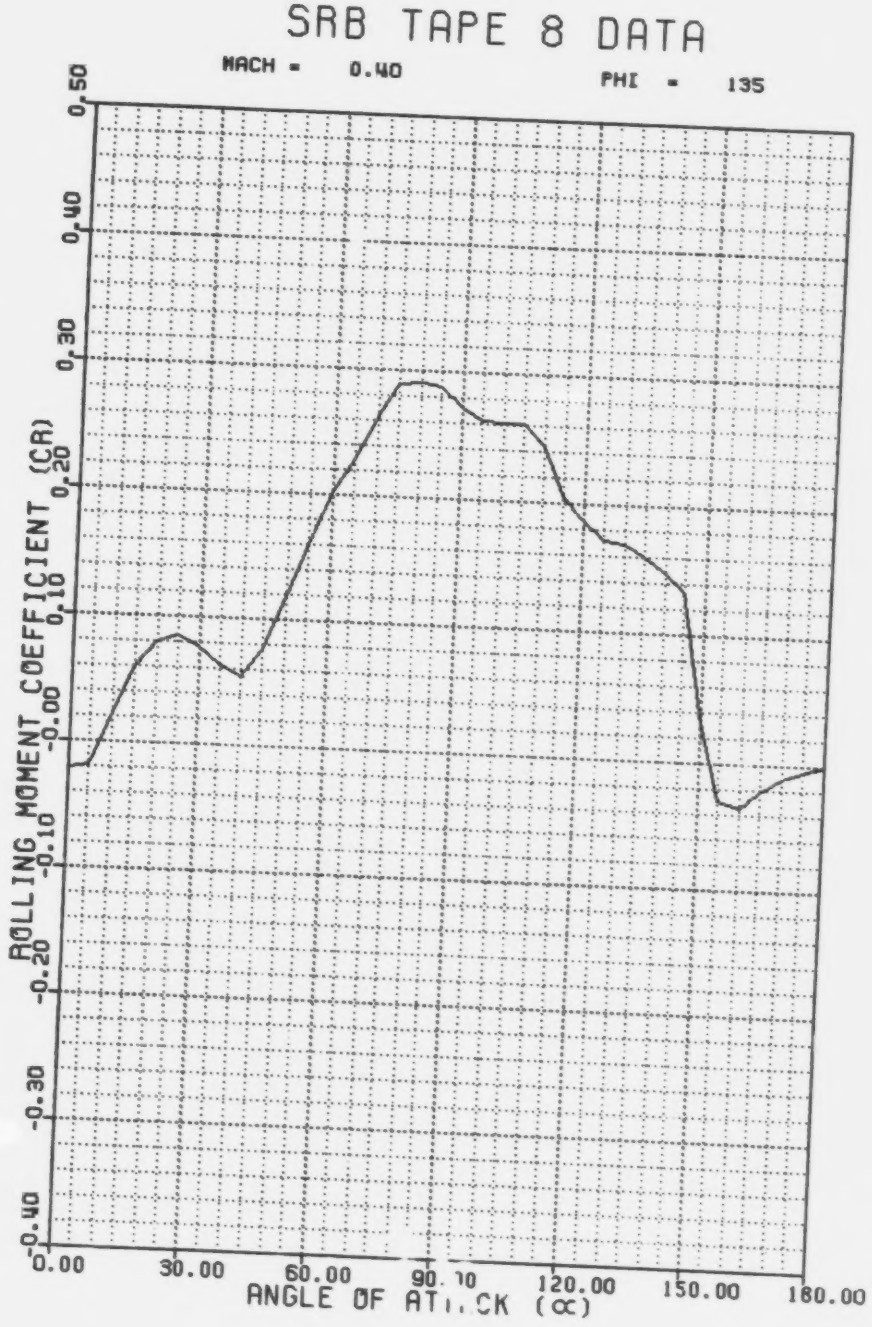
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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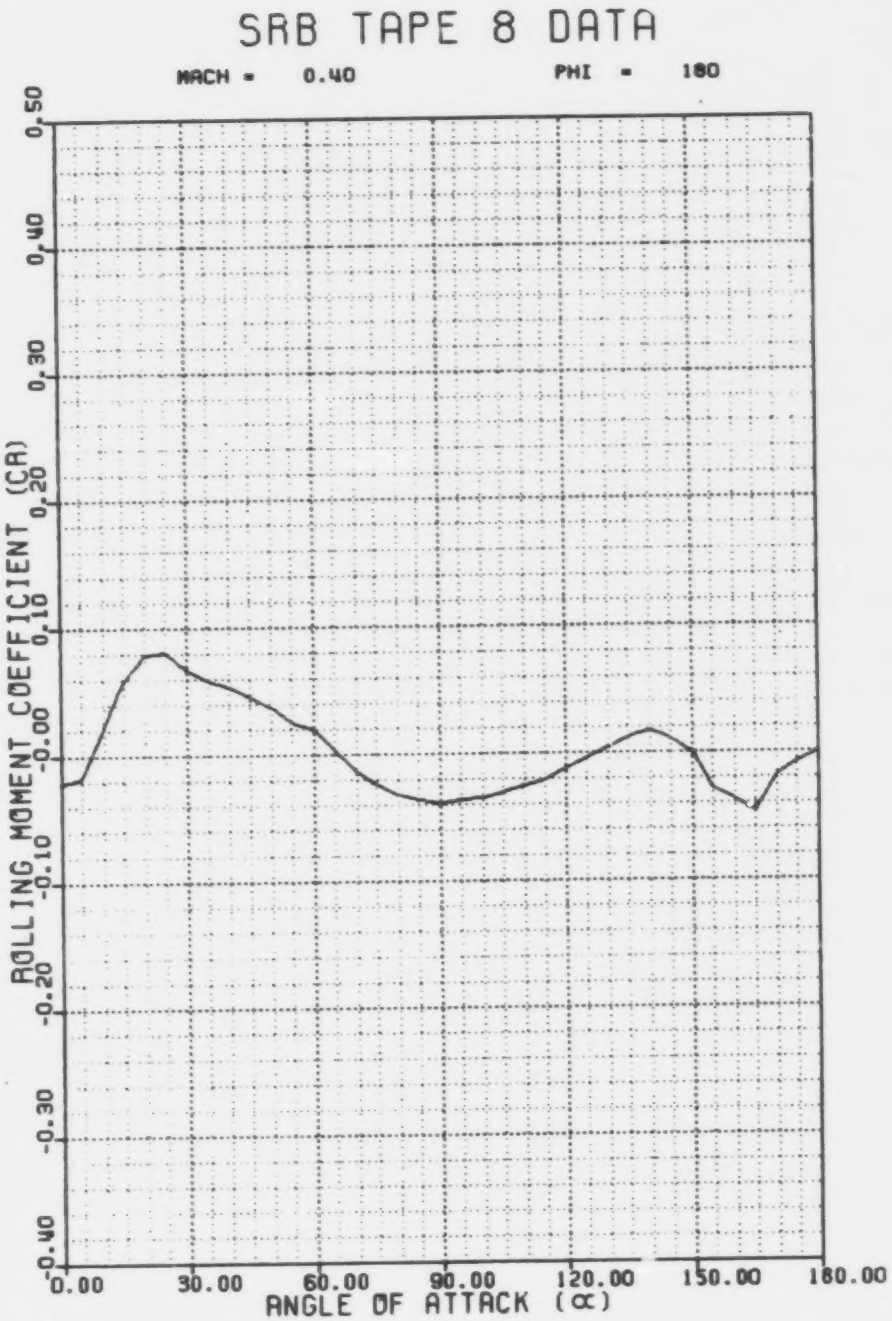
ANGLE OF ATTACK (α)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0.00
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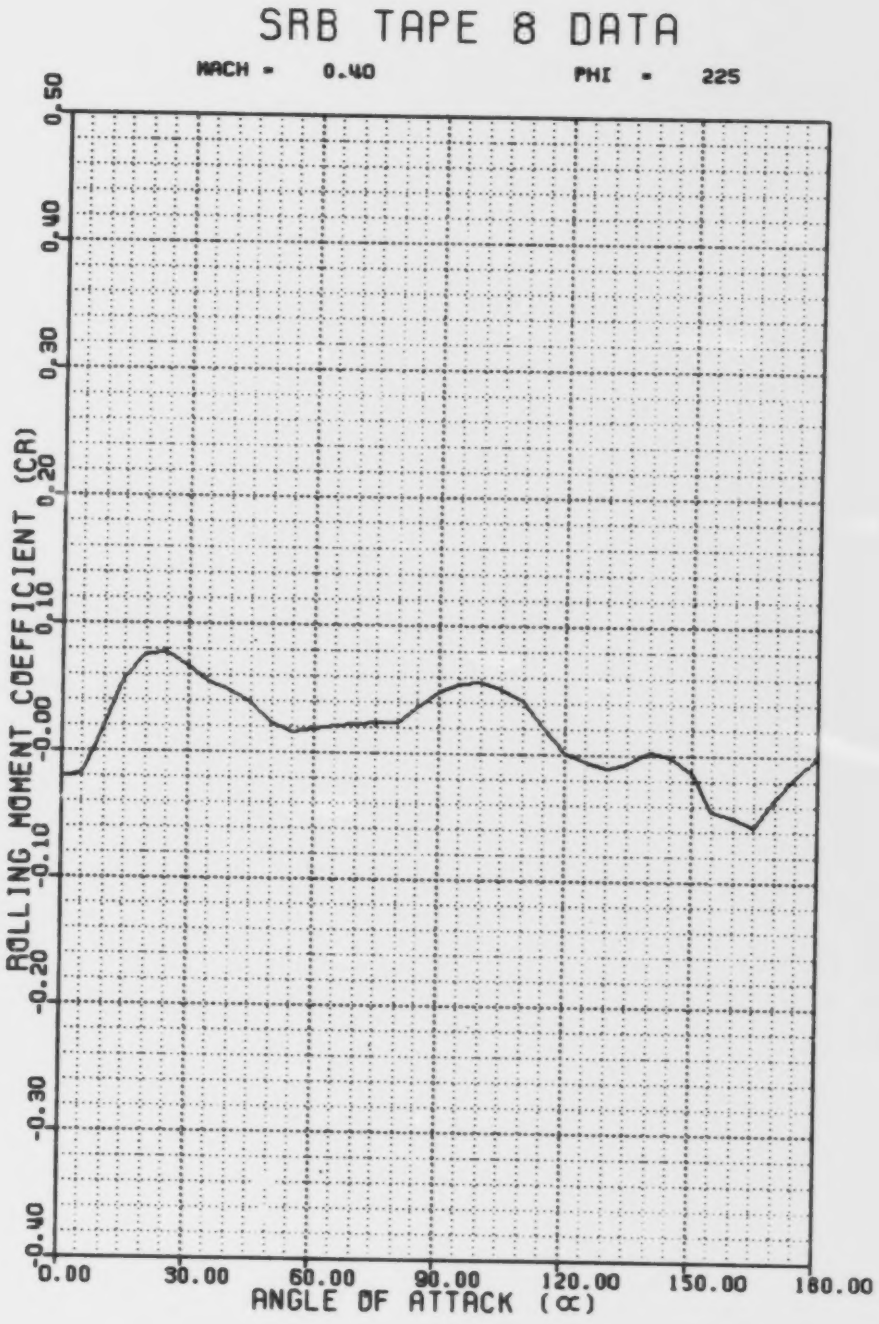
120.00
150.00
180.00
ANGLE OF ATTACK (α)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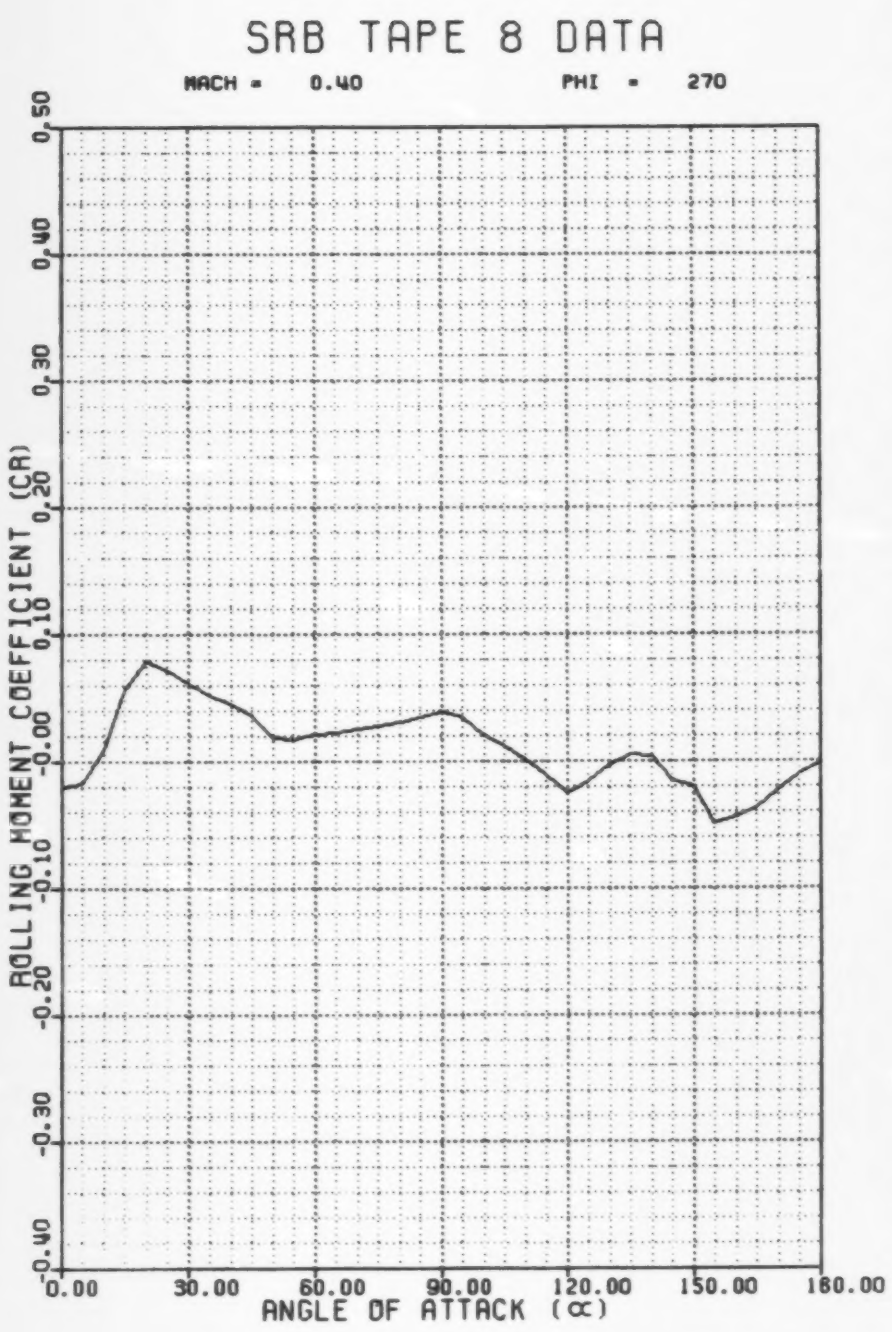
120.00
150.00
180.00
ANGLE OF ATTACK (α)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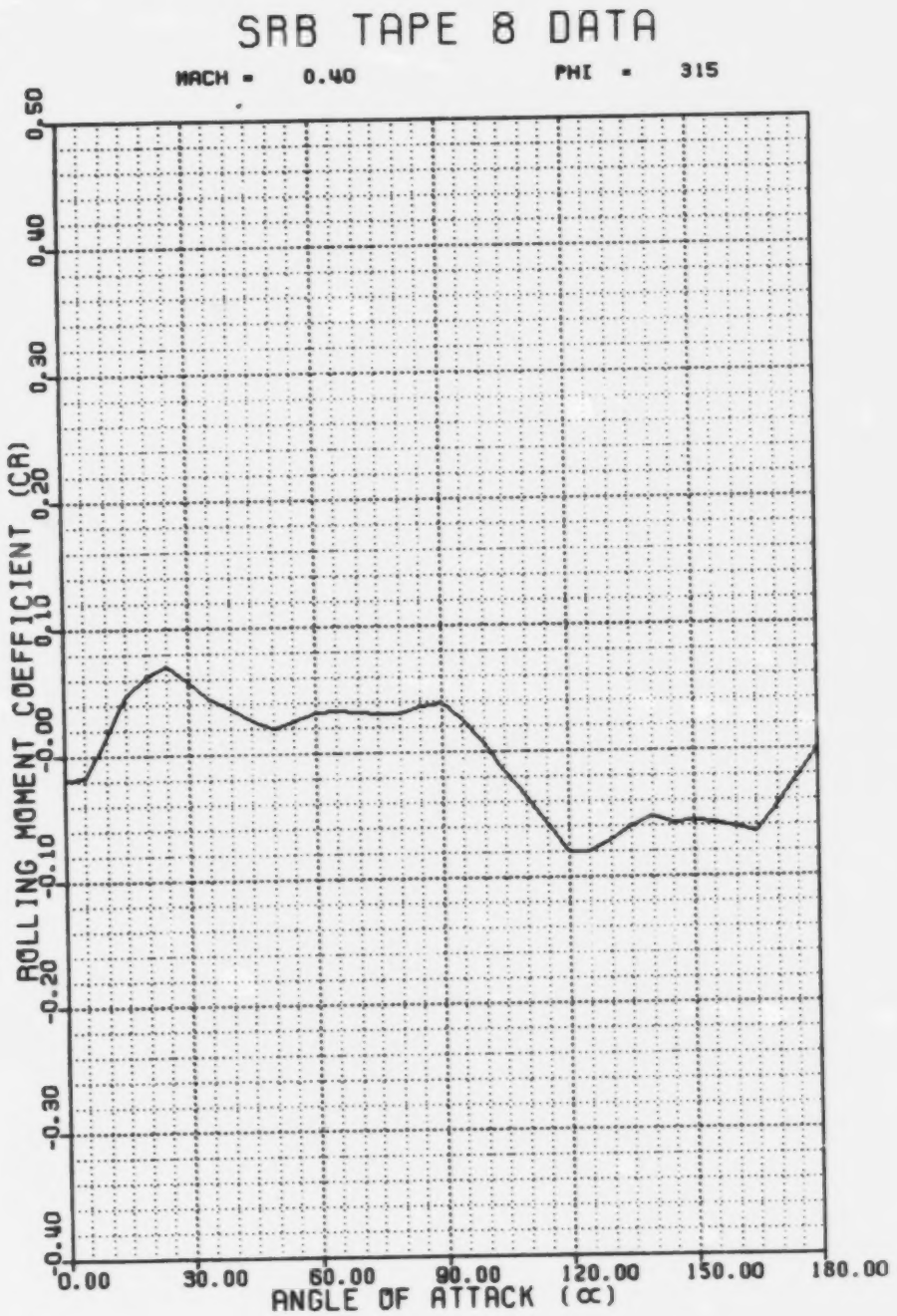
ANGLE OF ATTACK (α)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120.00
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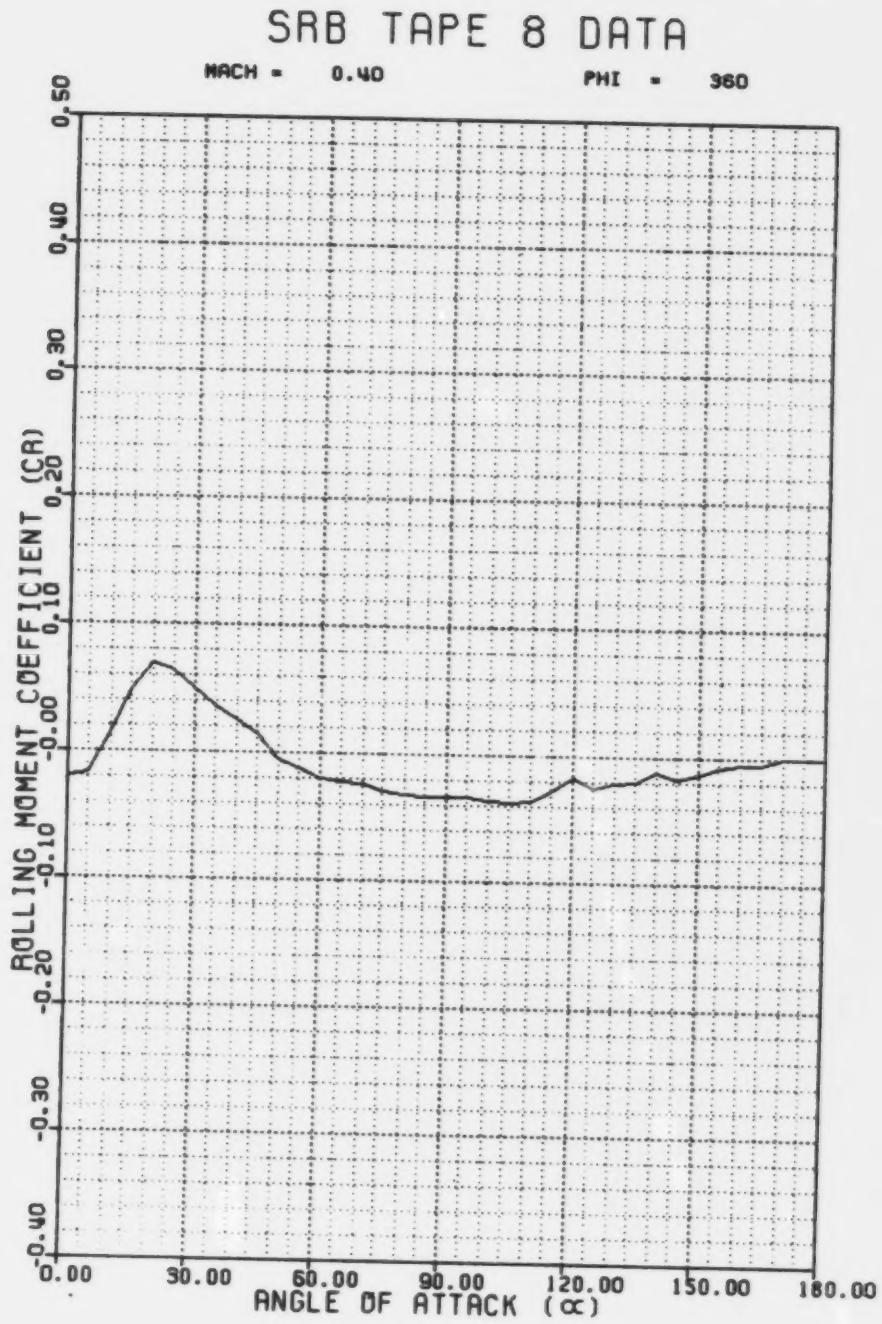
180.00
ANGLE OF ATTACK (α)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0.00
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60.00
90.00
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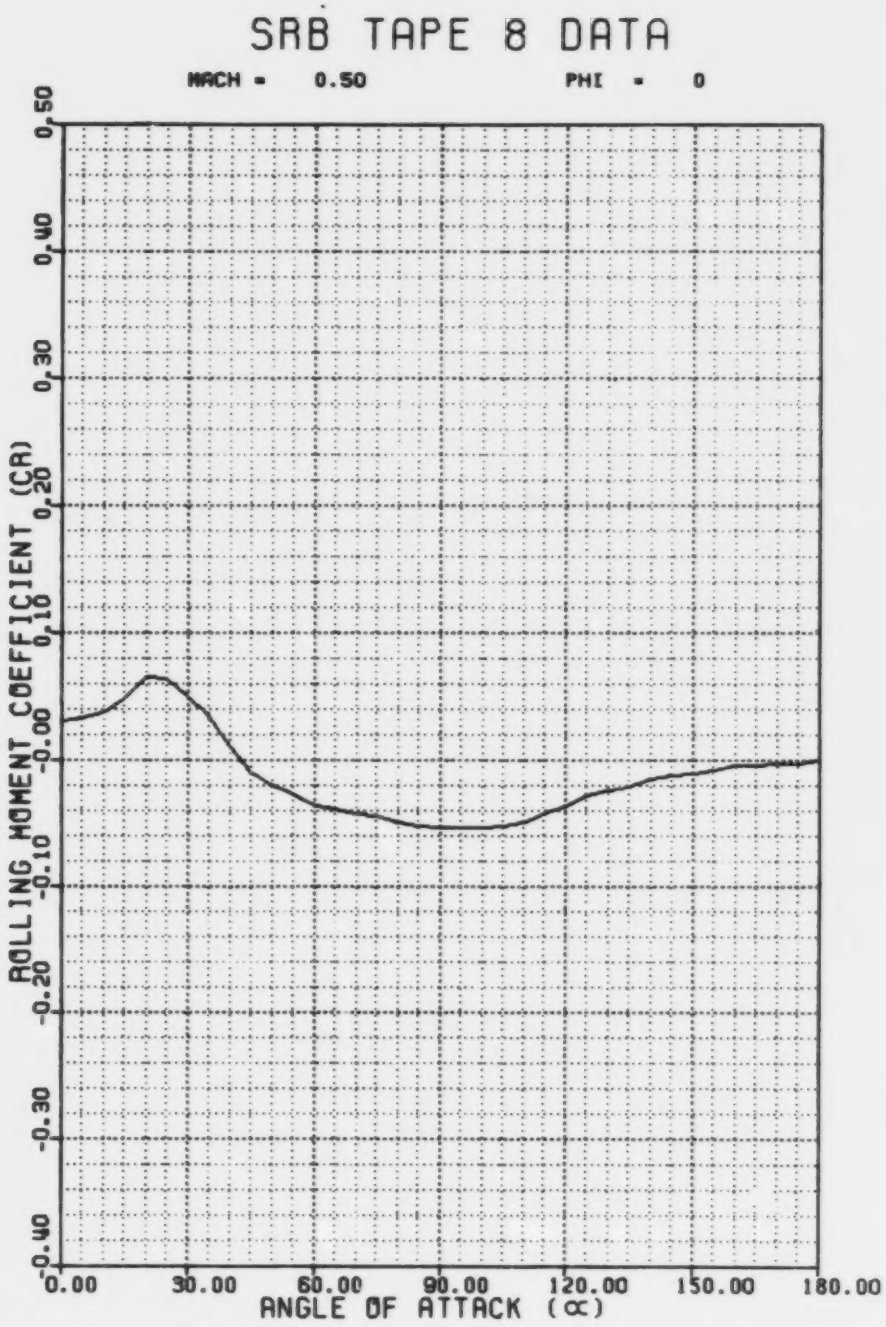
150.00
180.00
ANGLE OF ATTACK (α)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0.10
-0.00
-0.10
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0.00
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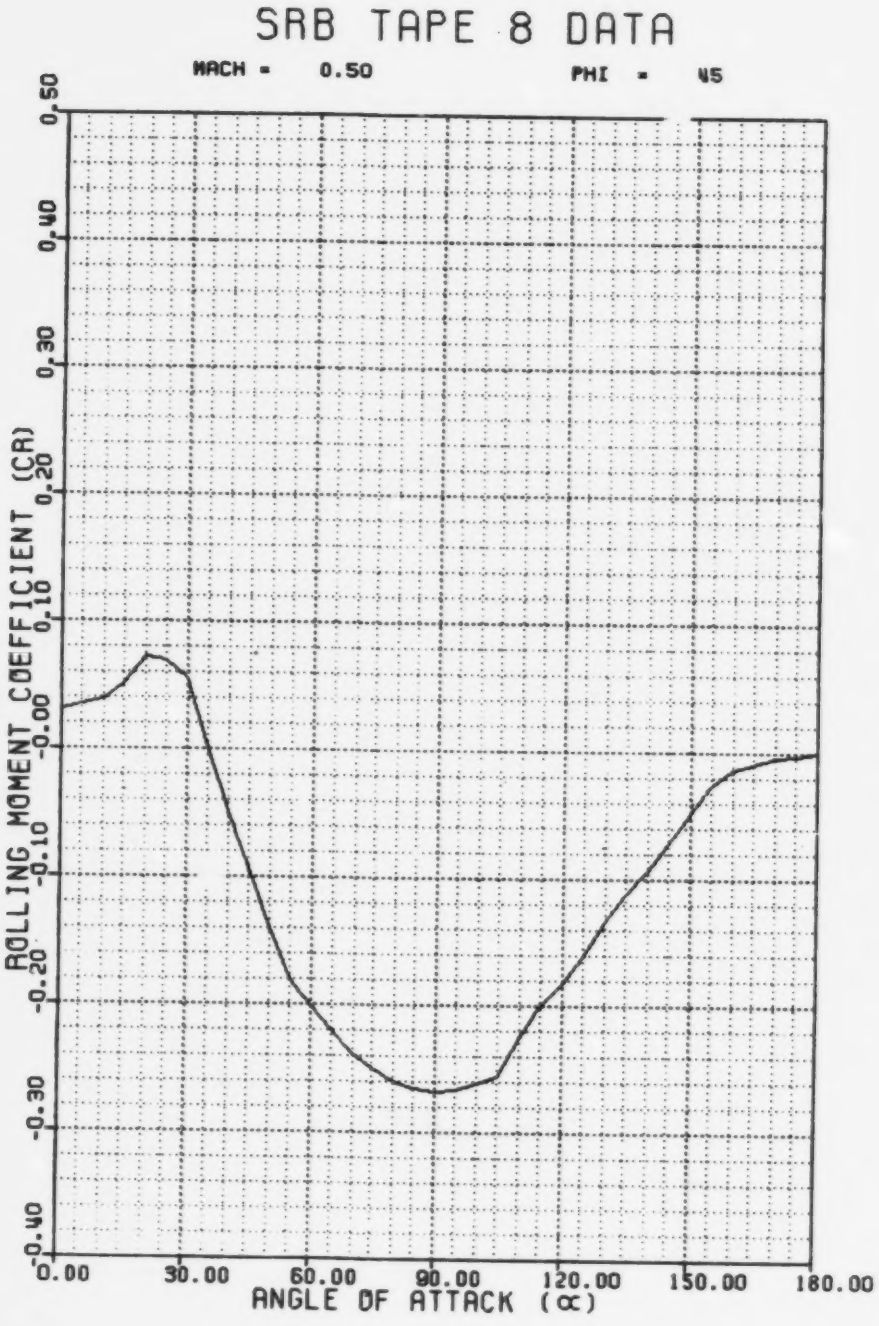
150.00
180.00
ANGLE OF ATTACK (α)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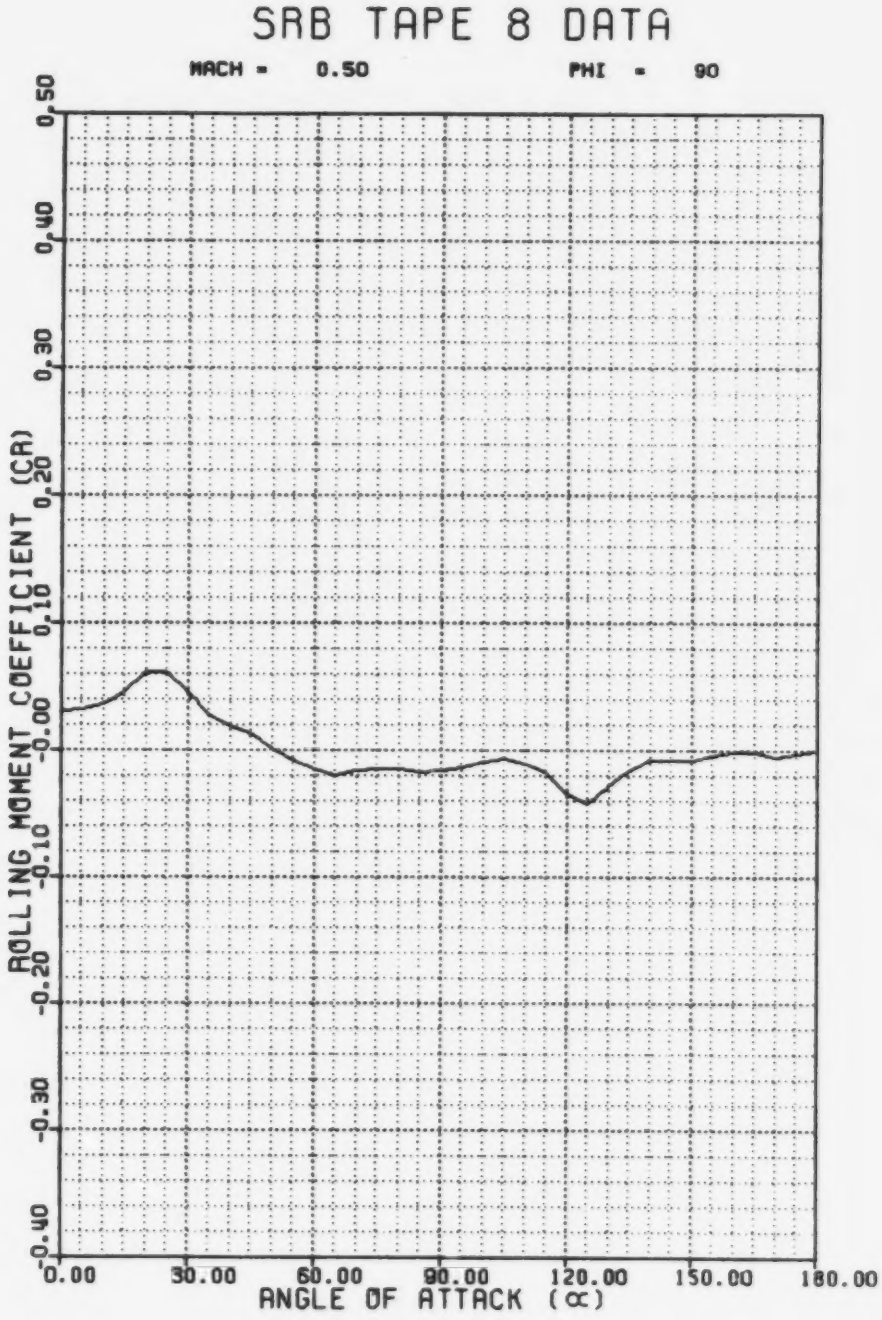
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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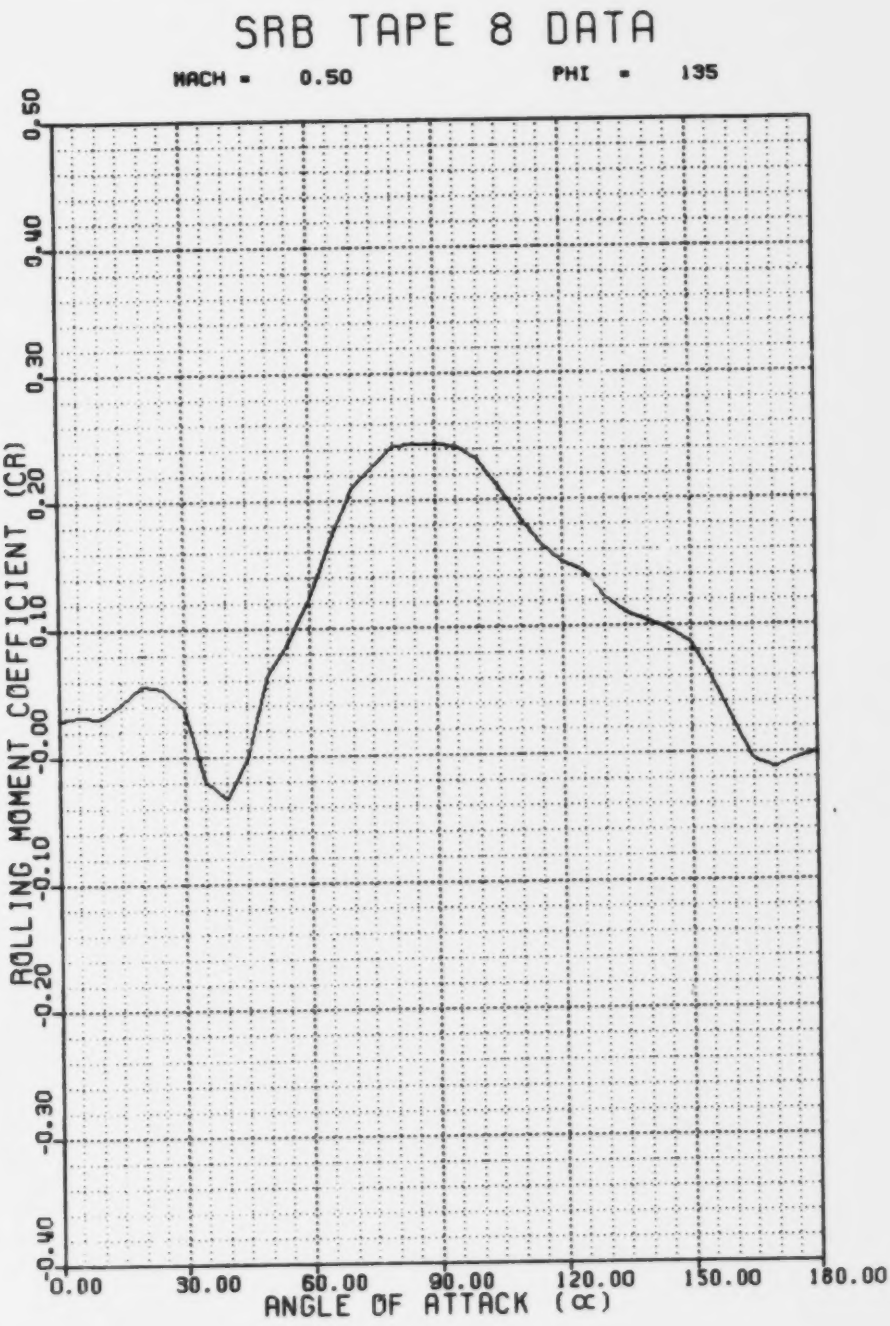
180.00
ANGLE OF ATTACK (α)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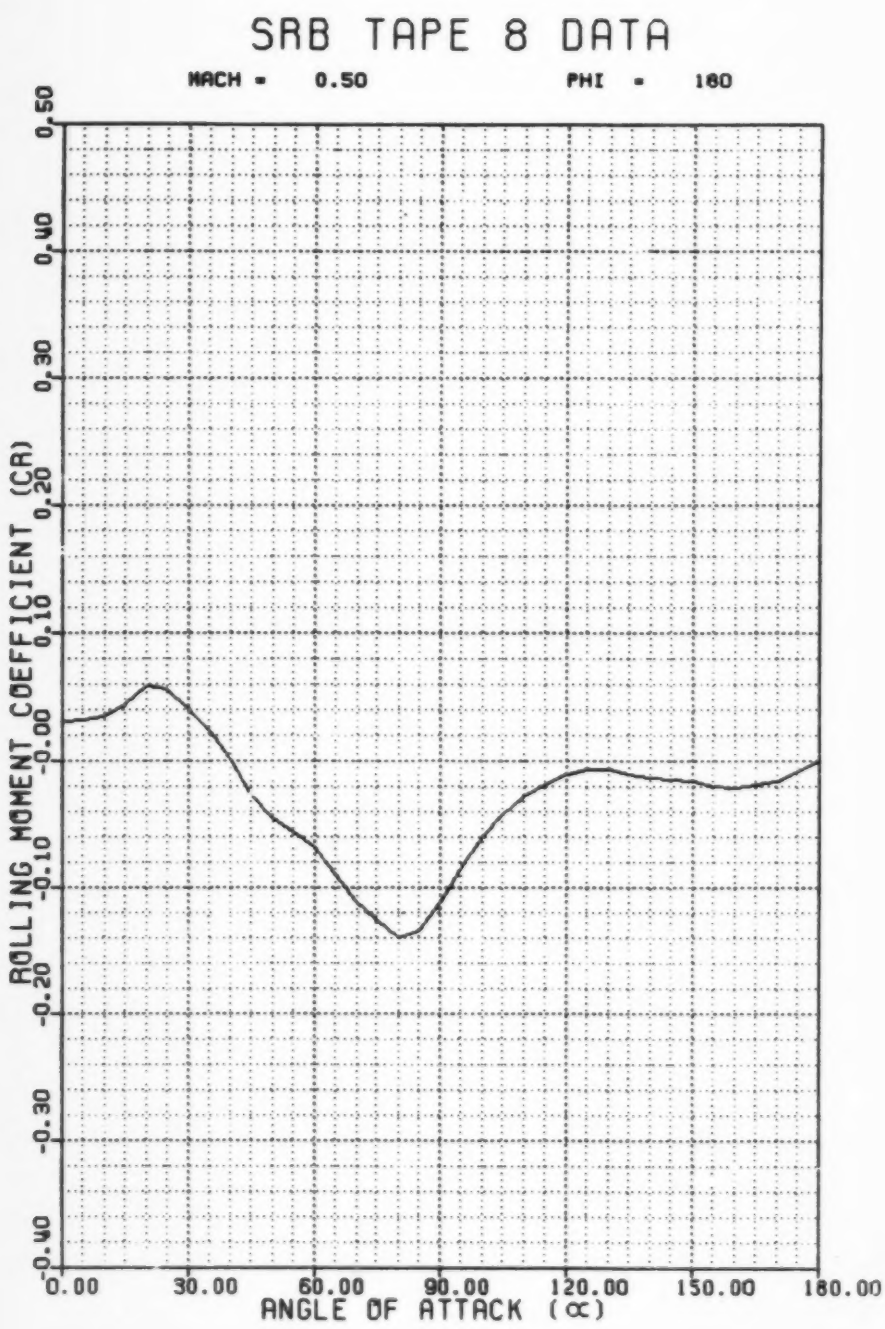
150.00
180.00
ANGLE OF ATTACK (α)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-0.20
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90.00
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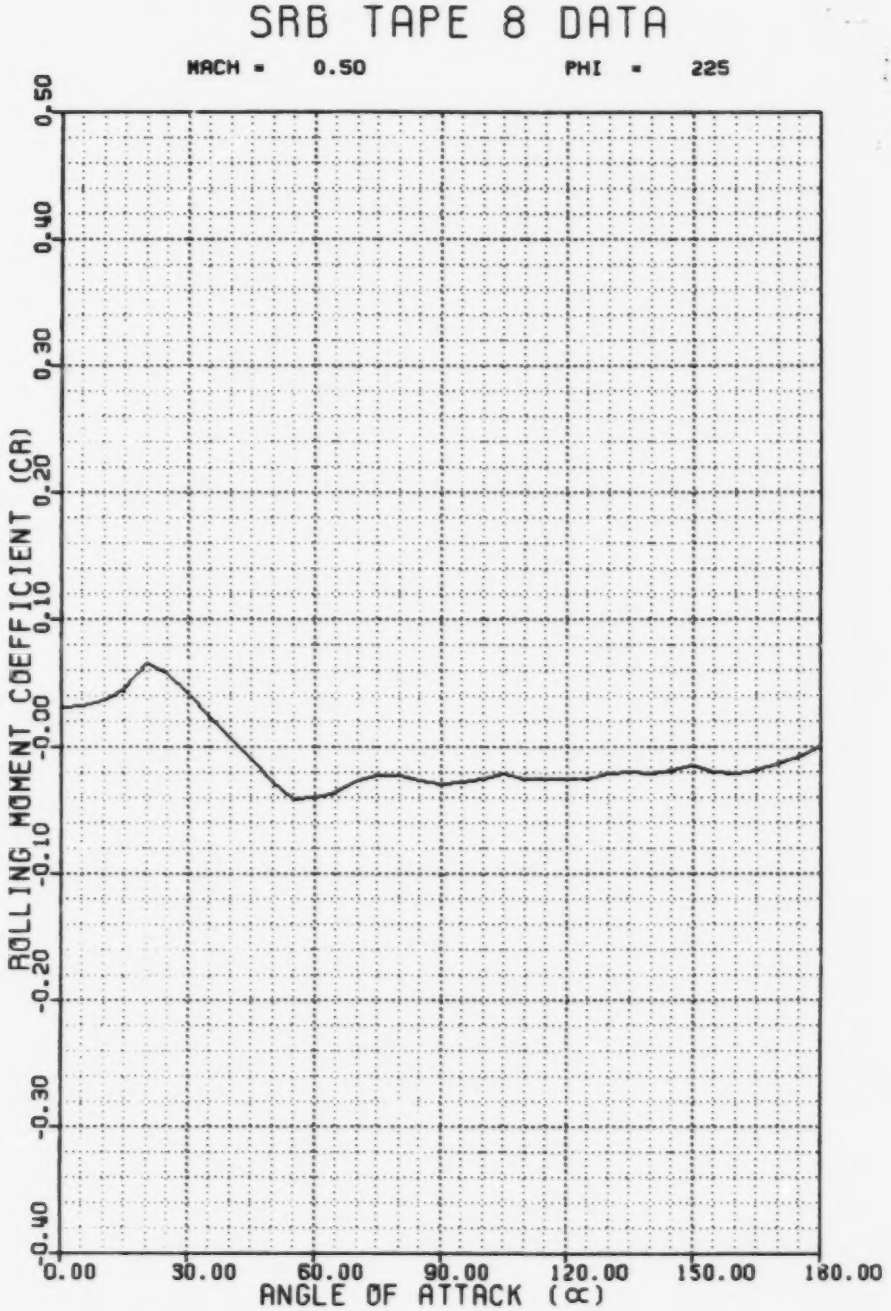
150.00
180.00
ANGLE OF ATTACK (α)

B-734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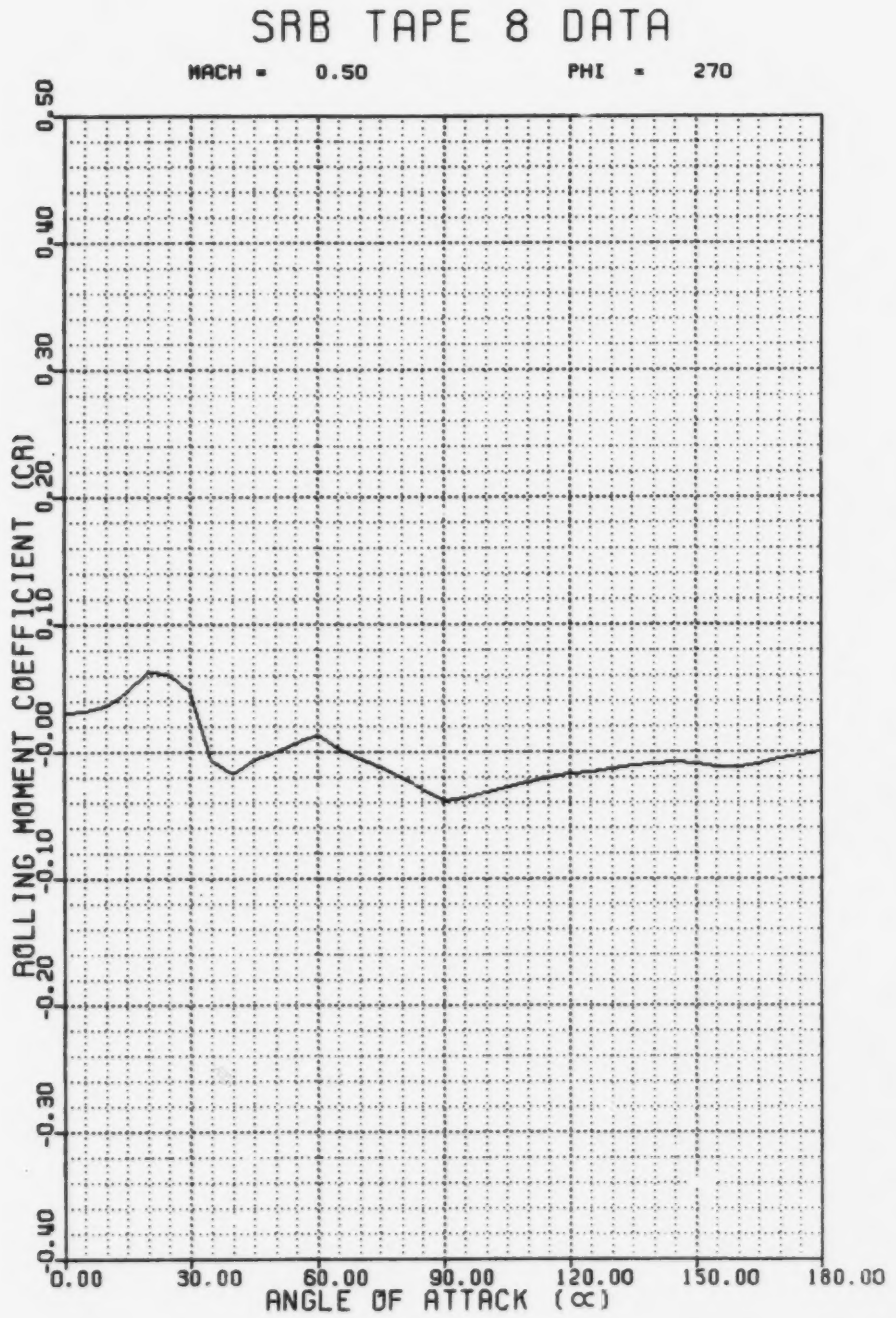
180.00
ANGLE OF ATTACK (α)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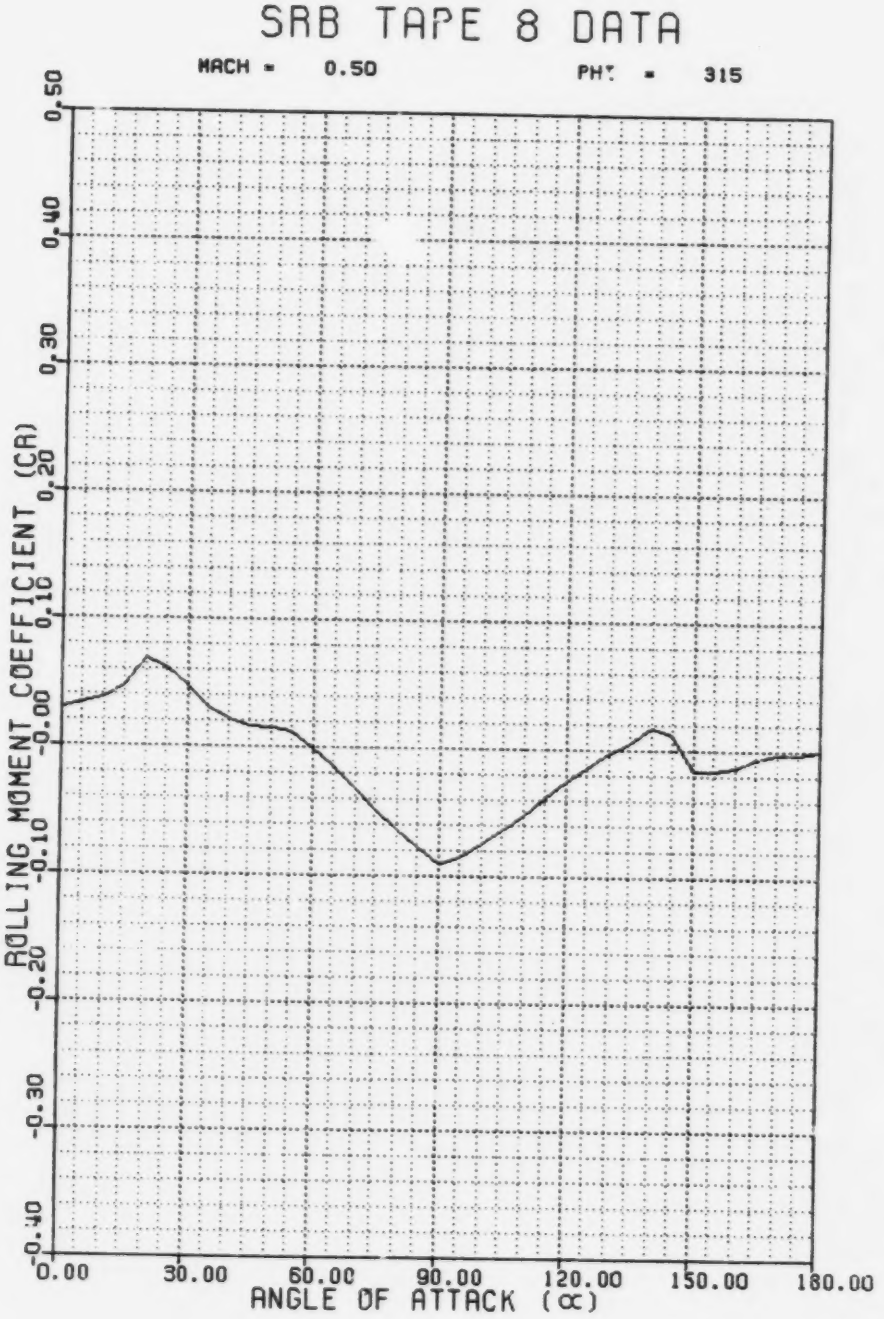
180.00
ANGLE OF ATTACK (α)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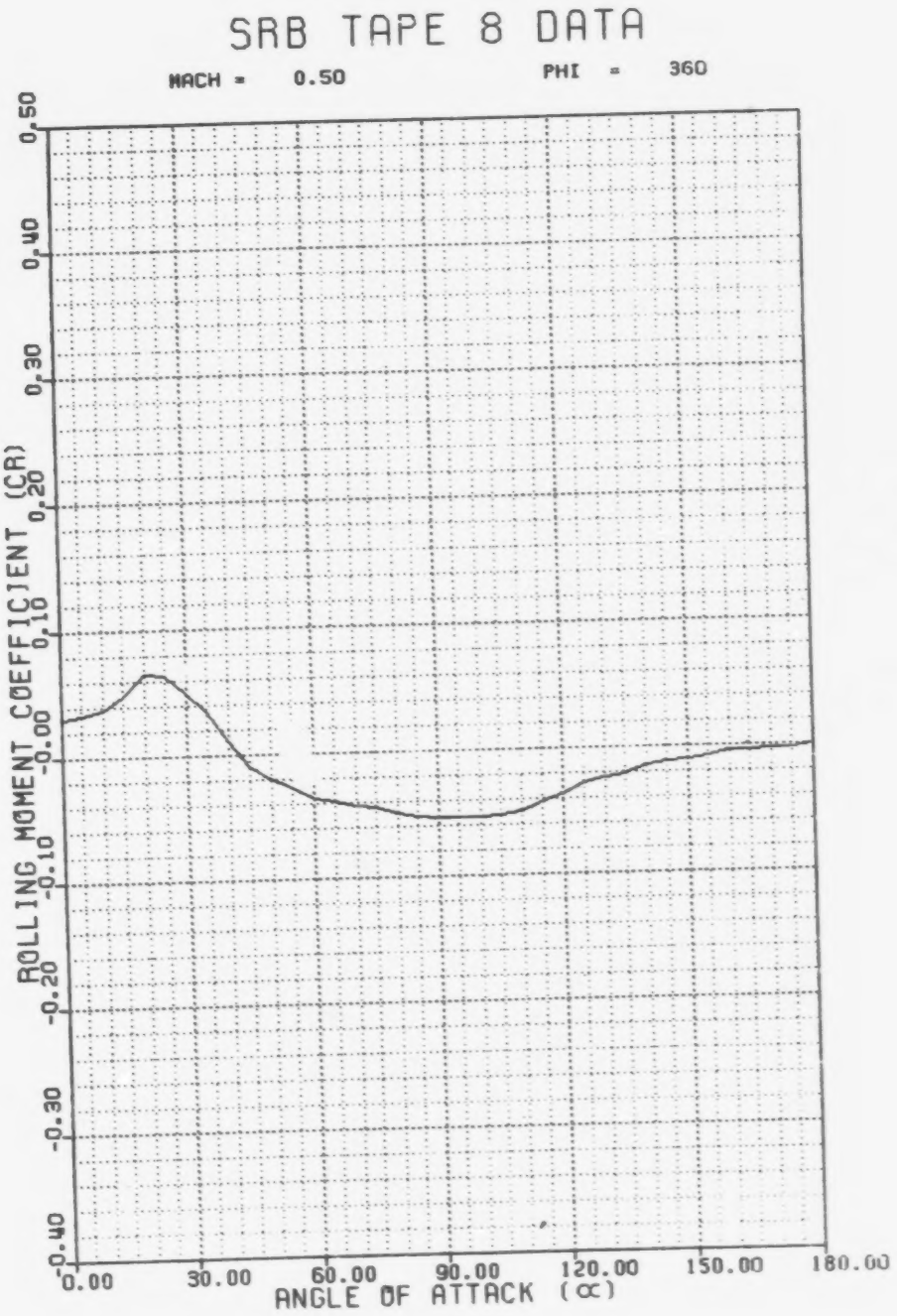
150.00
180.00
ANGLE OF ATTACK (α)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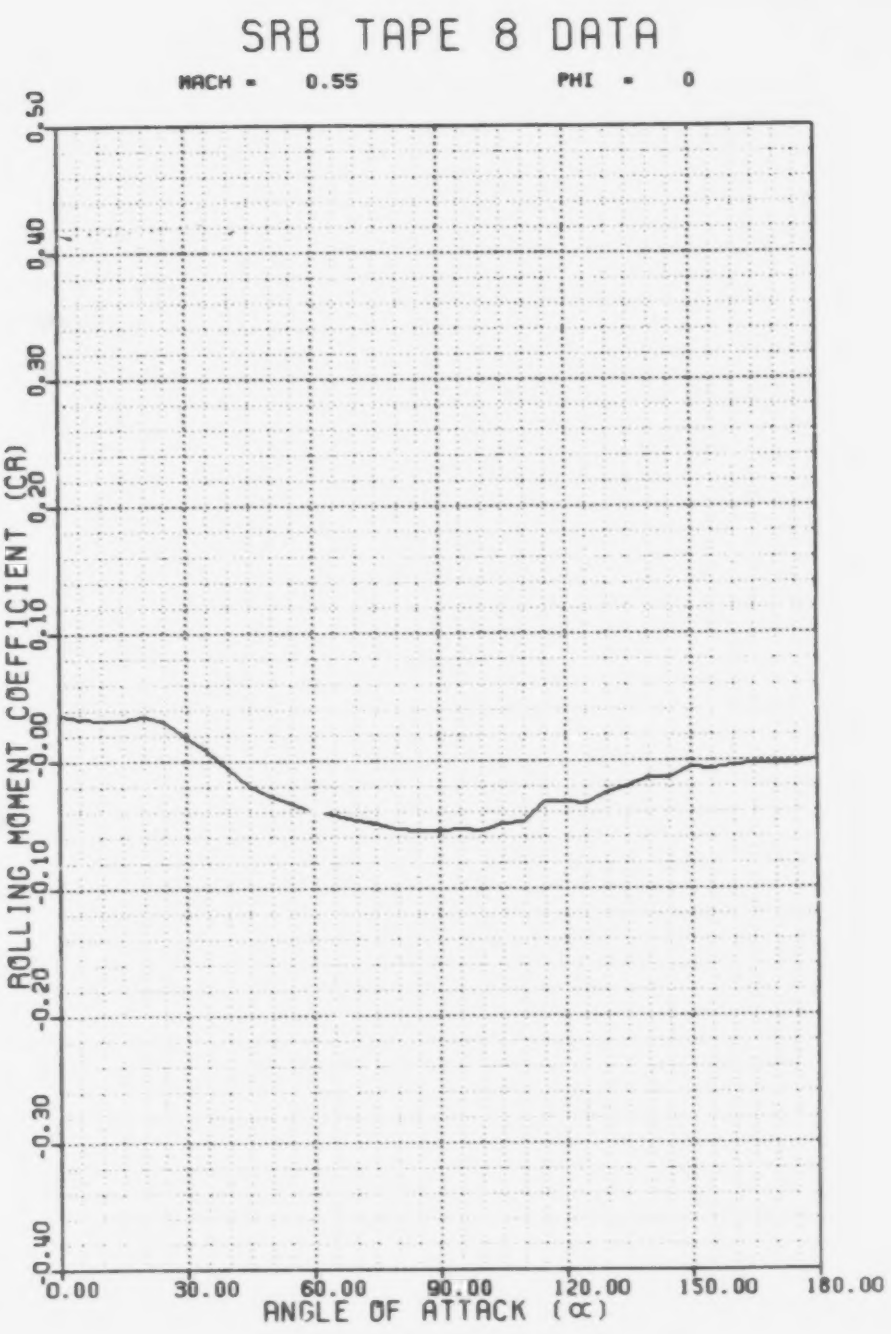
180.00
ANGLE OF ATTACK (α)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60.00
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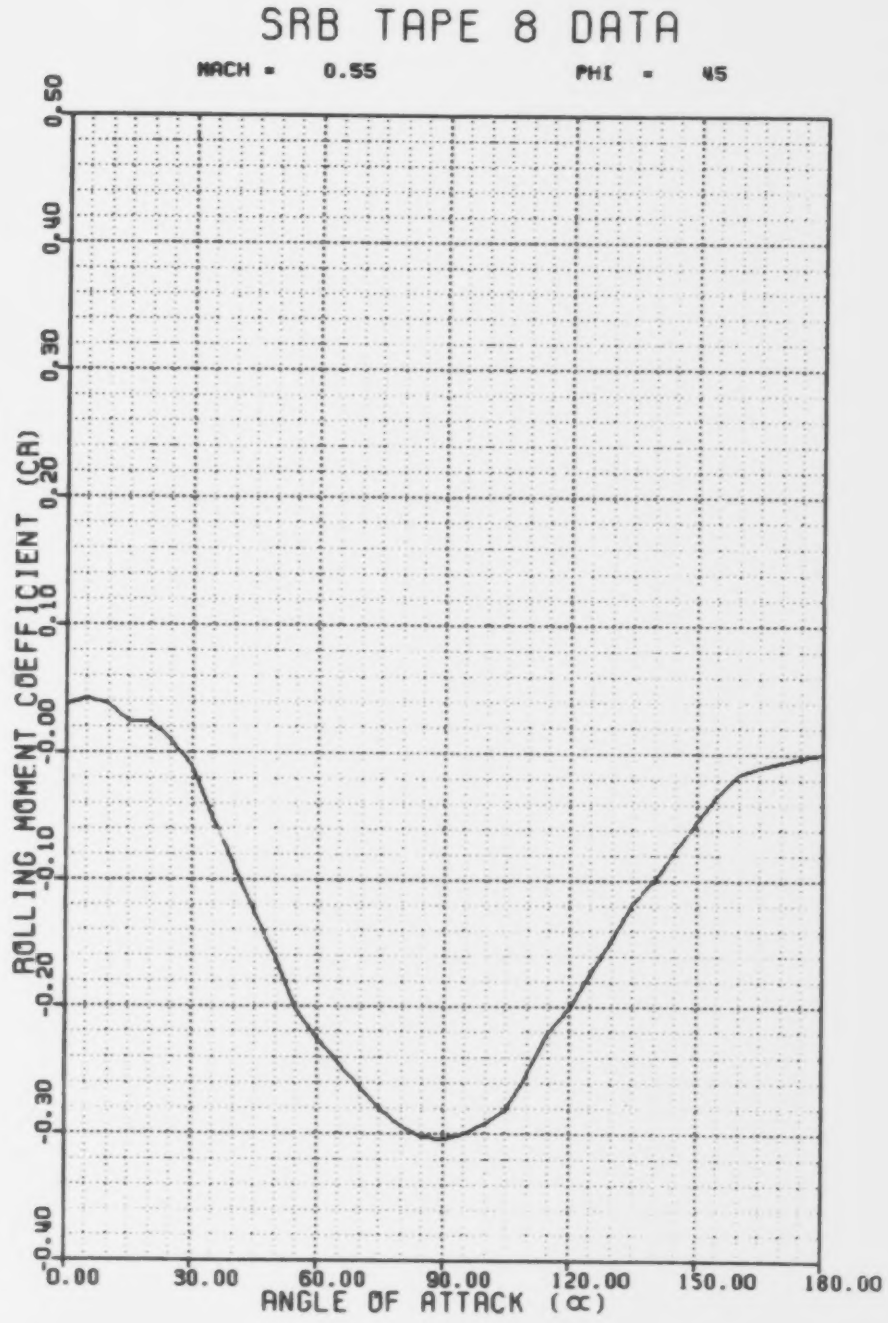
150.00
180.00
ANGLE OF ATTACK (α)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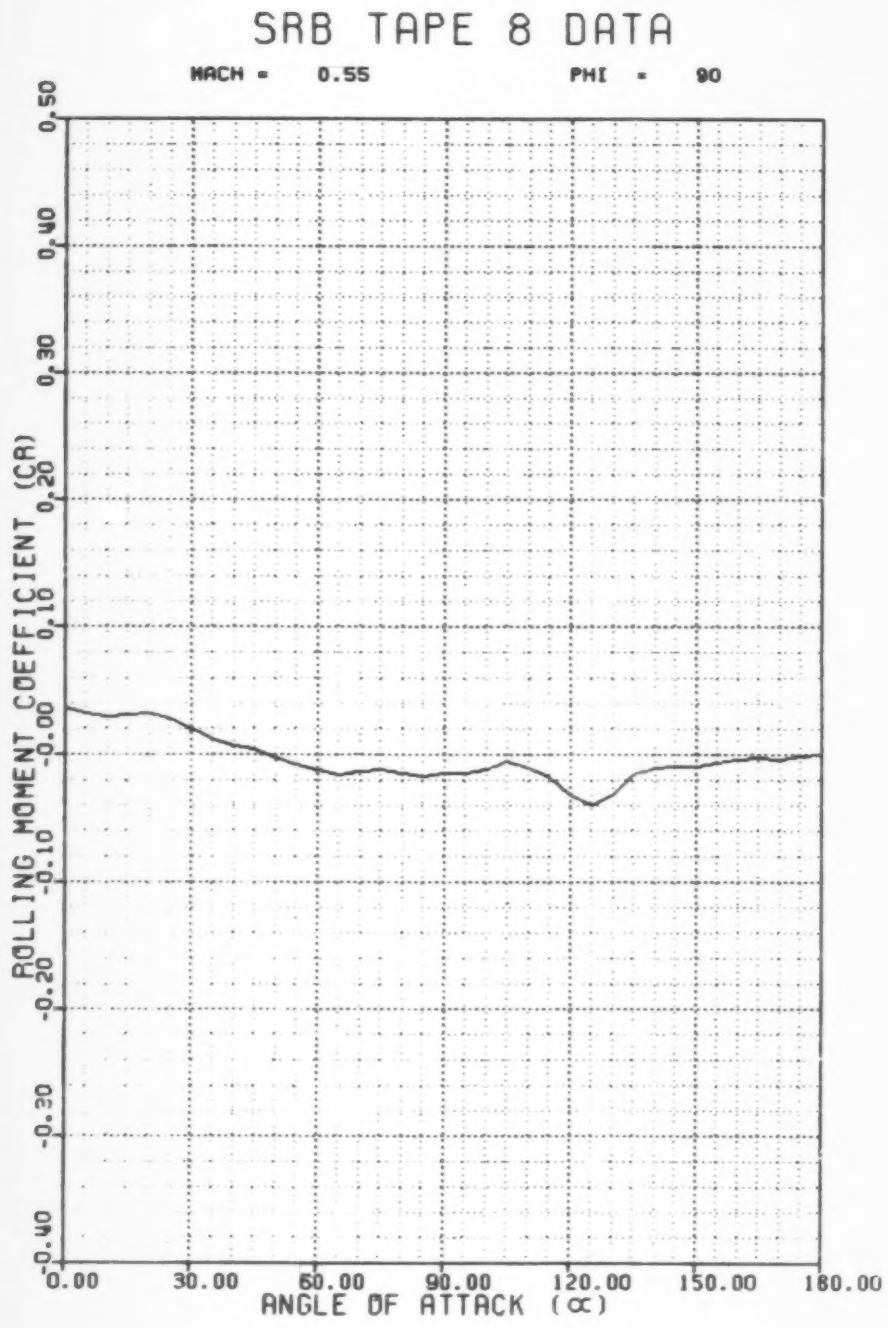
180.00
ANGLE OF ATTACK (α)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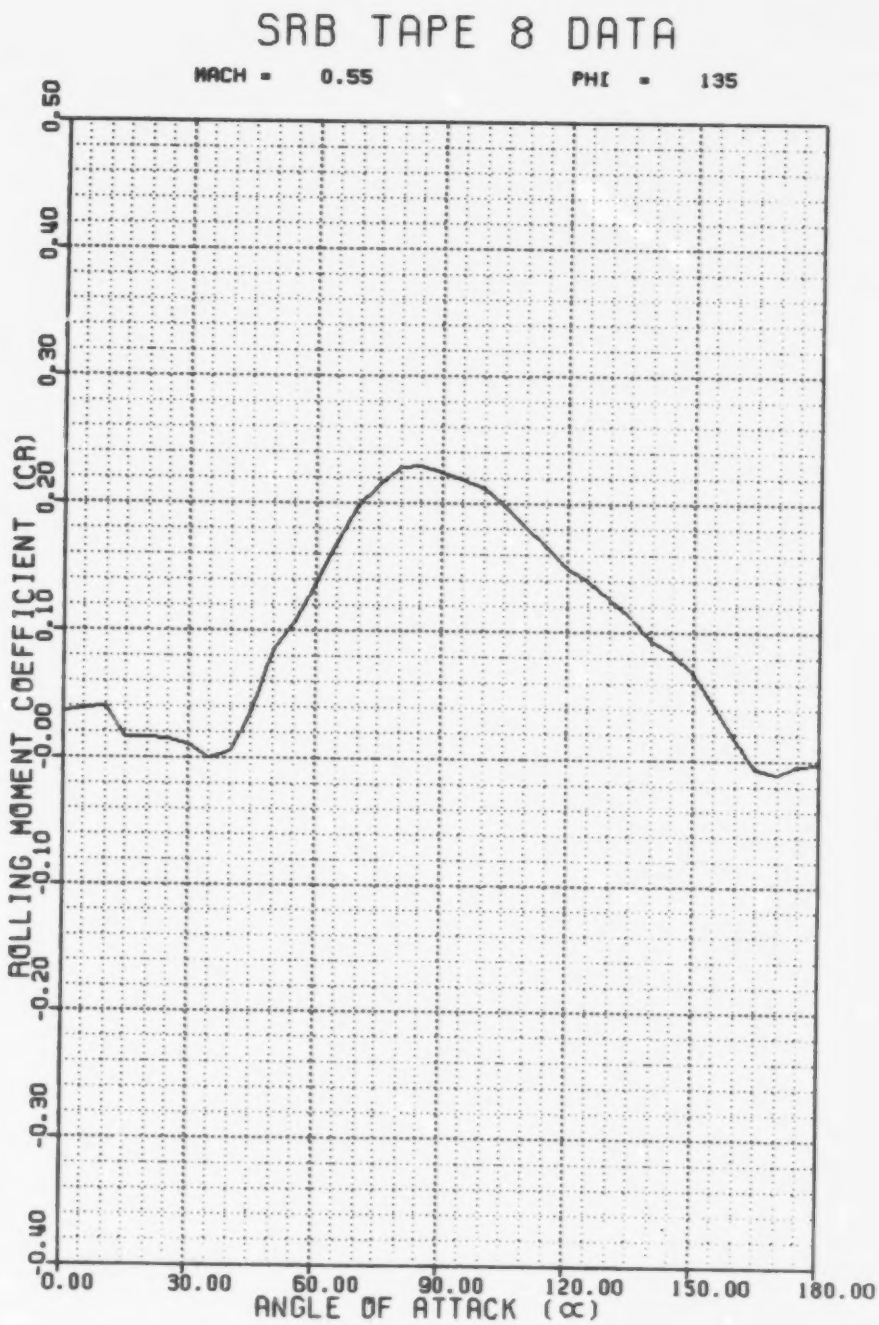
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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-0.00
-0.10
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-0.30
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0.00
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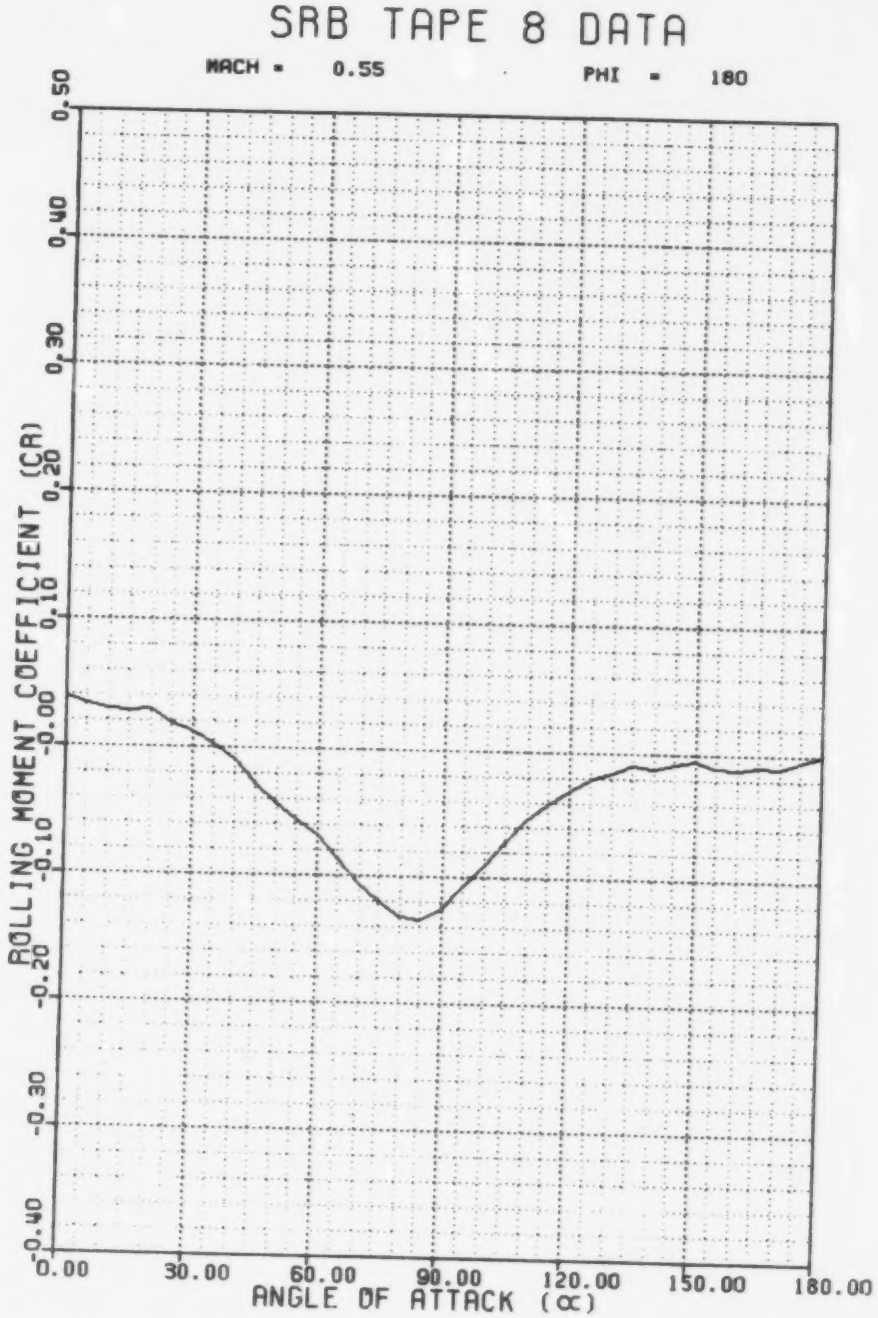
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
PHI = 180
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-0.00
-0.10
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0.00
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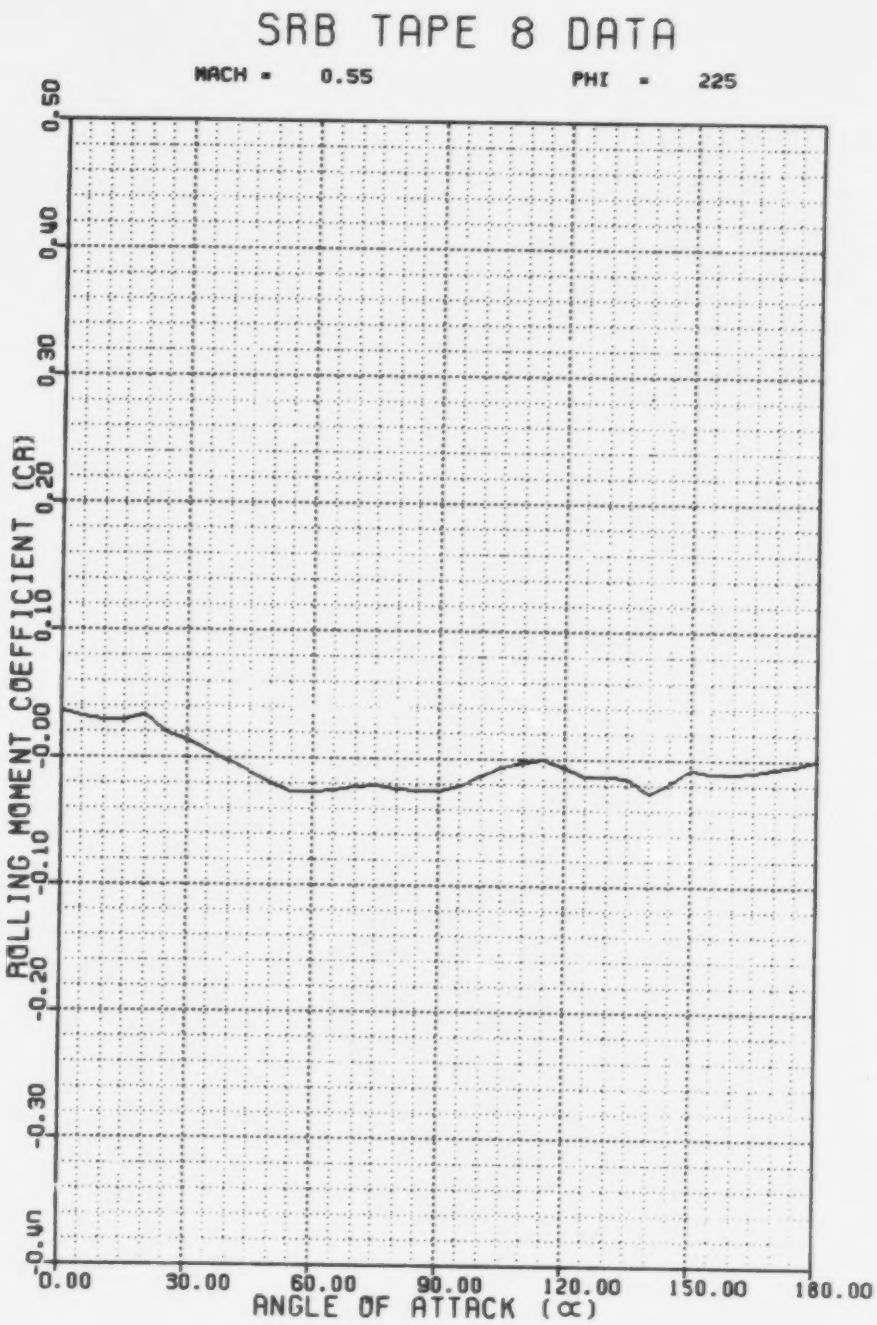
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.55
PHI = 225
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0.00
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120.00
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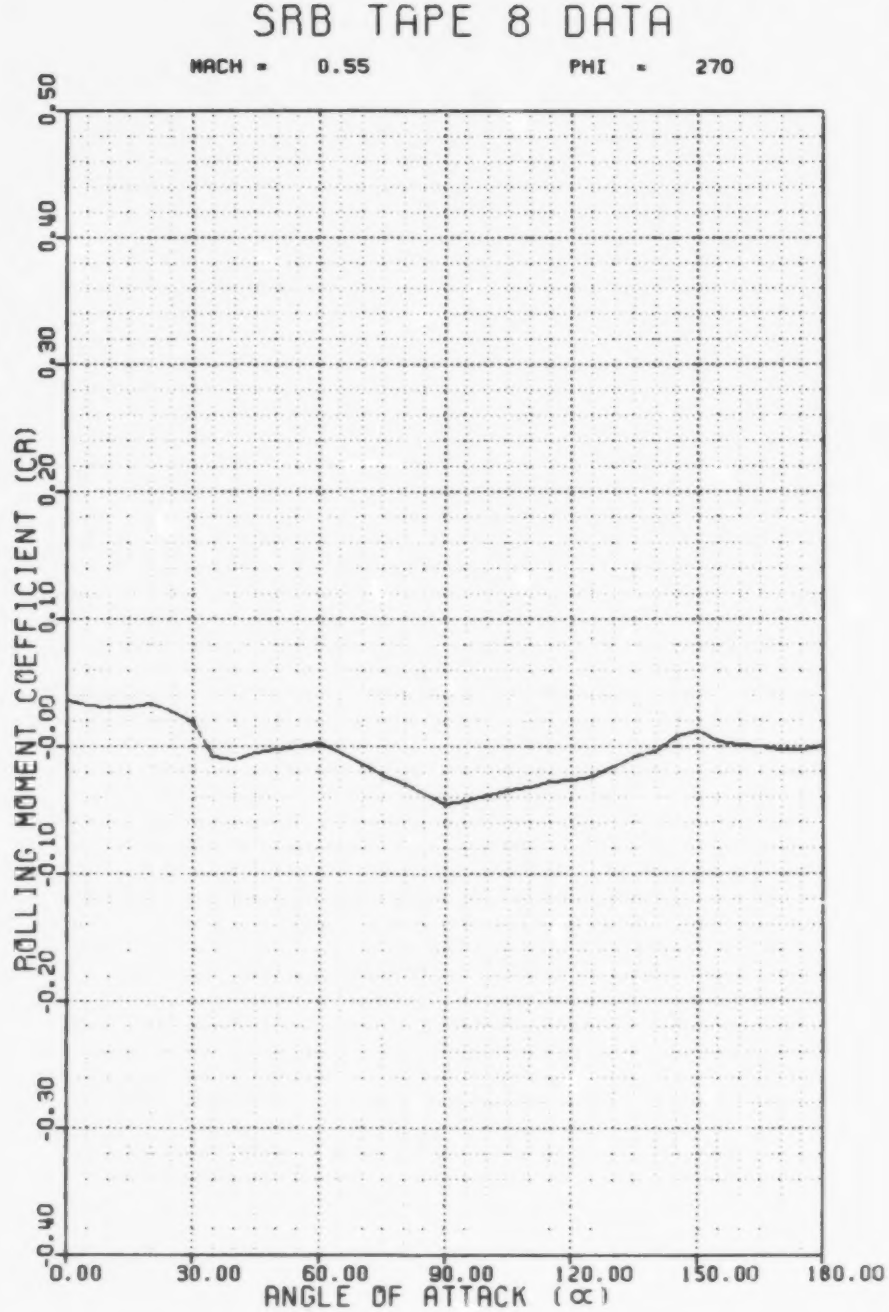
ANGLE OF ATTACK (α)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-0.10
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0.00
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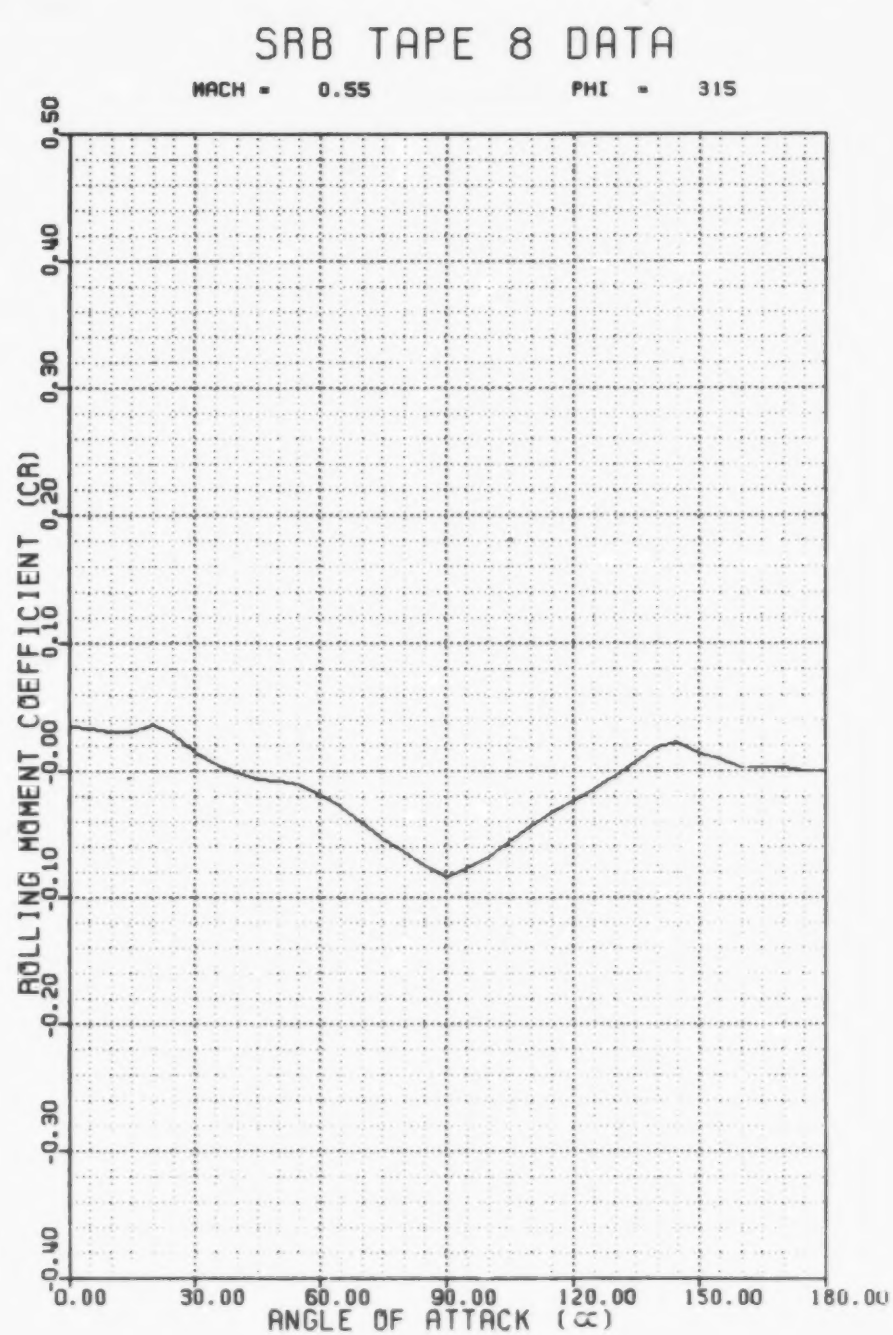
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 315
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-0.00
-0.10
-0.20
-0.30
-0.40
0.00
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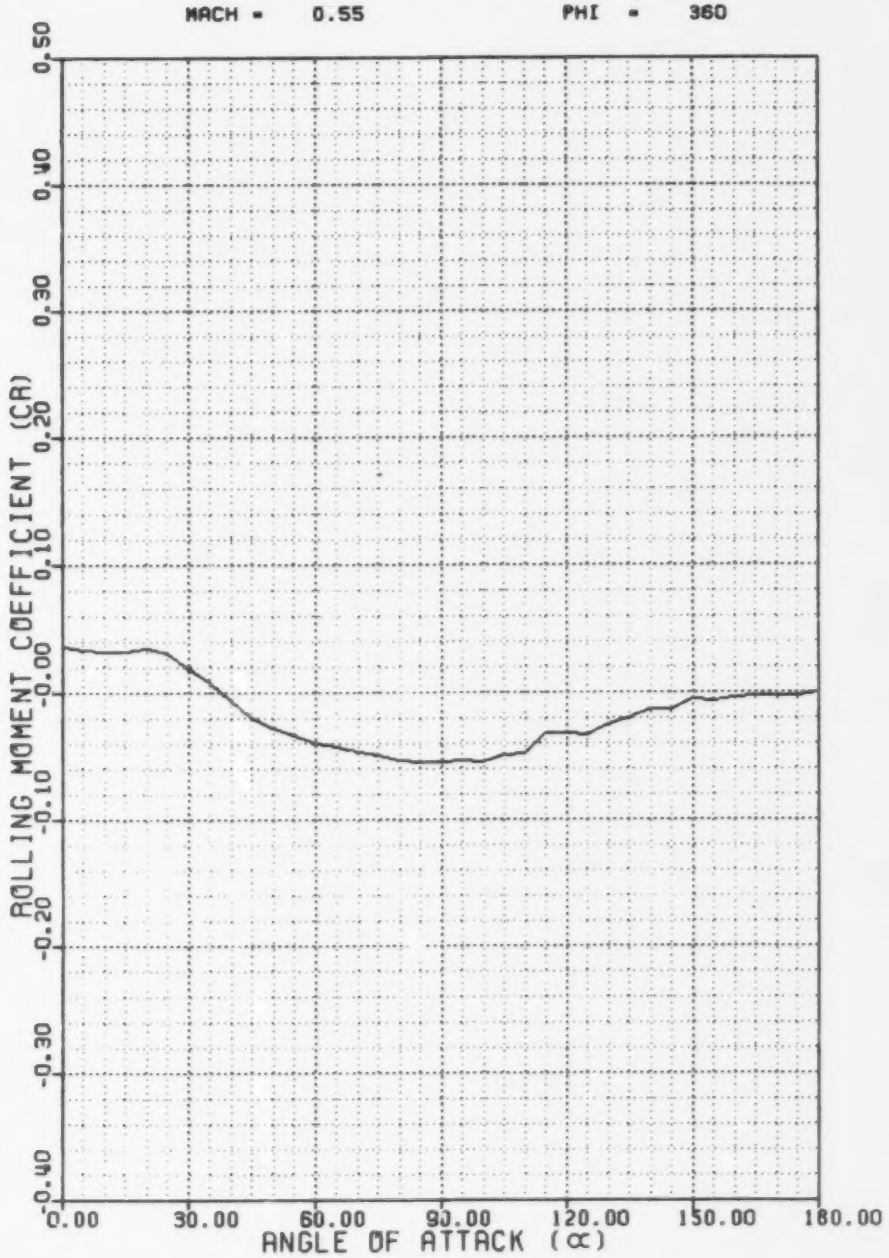
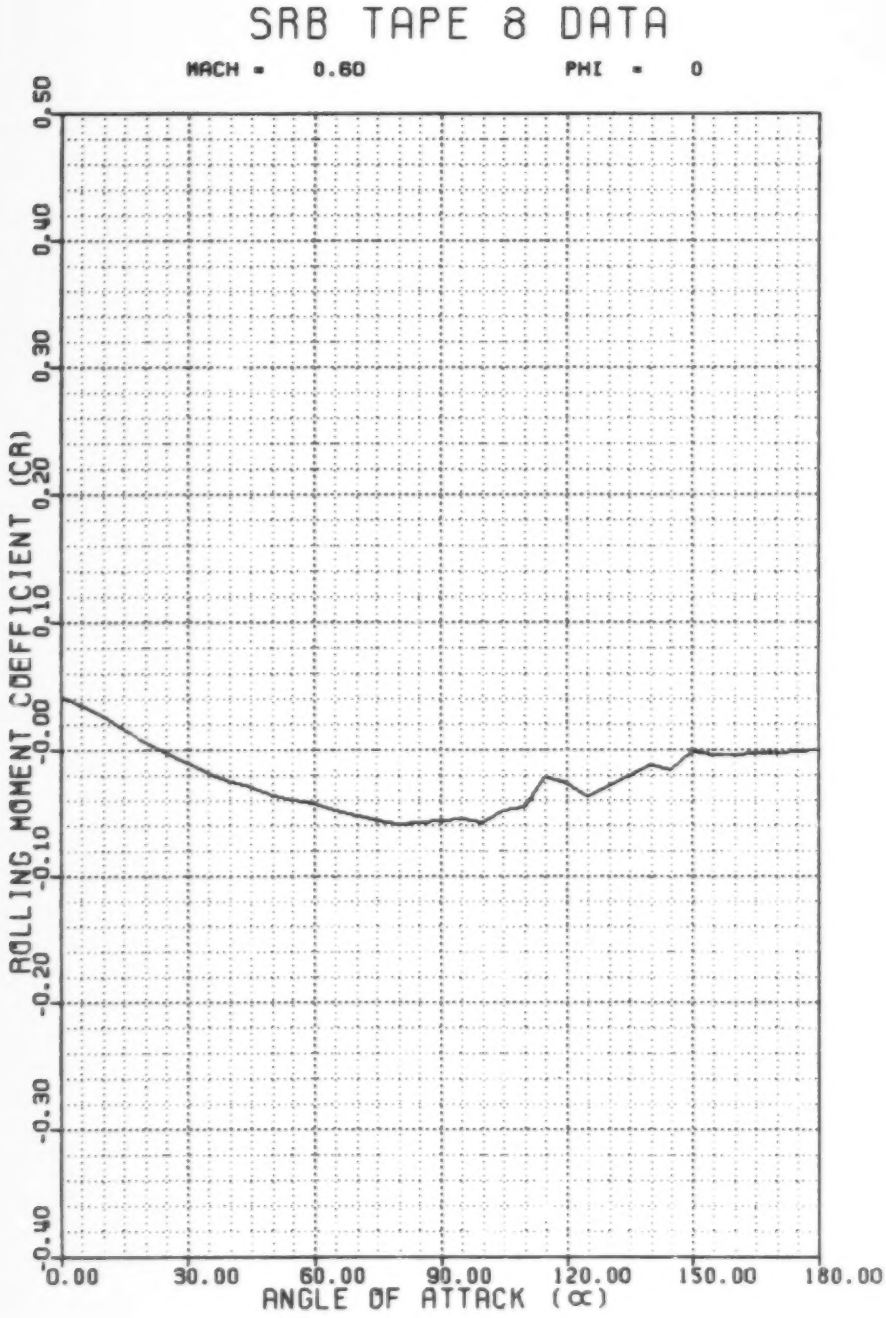
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 0.55 PHI = 360

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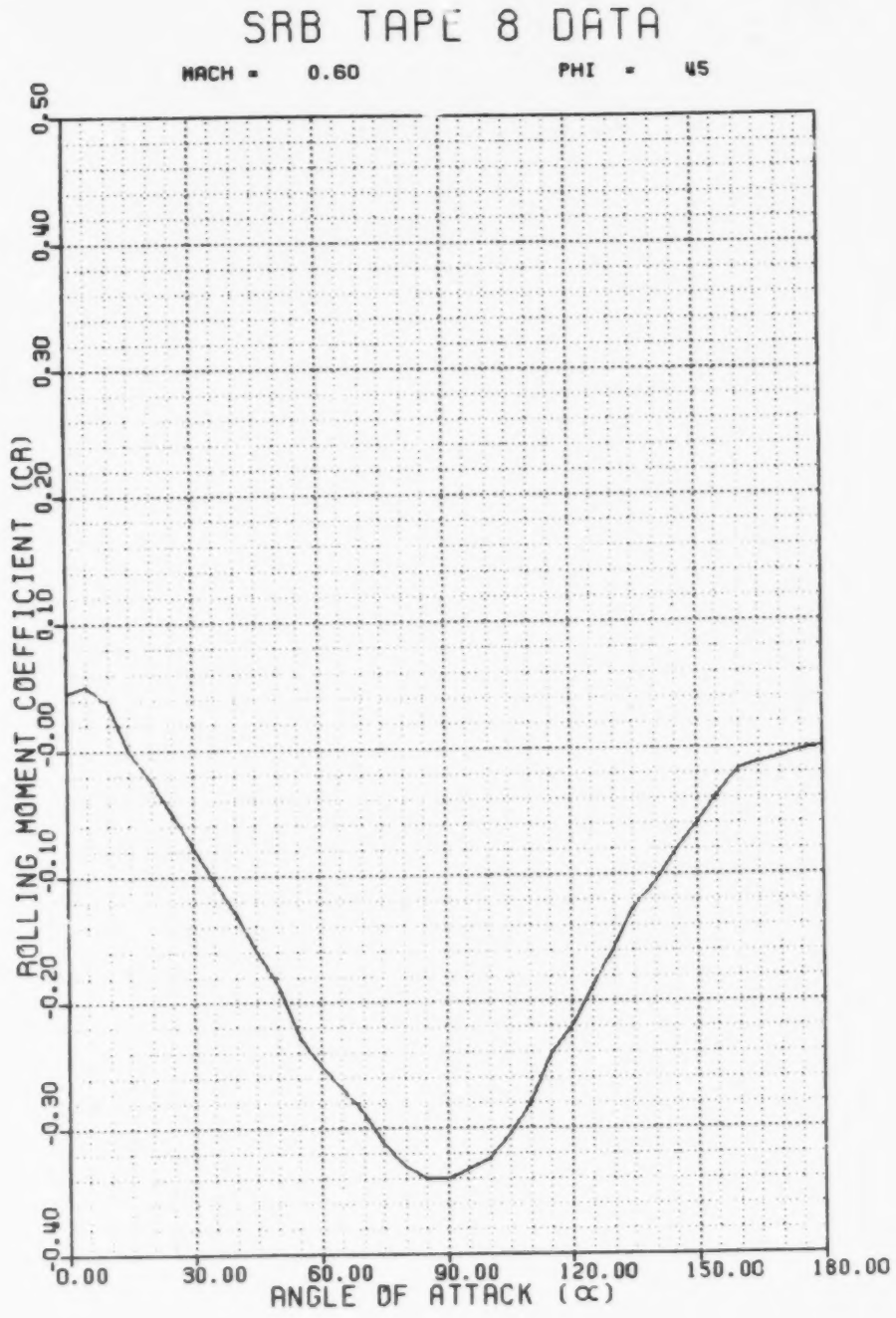
150.00
180.00
ANGLE OF ATTACK (α)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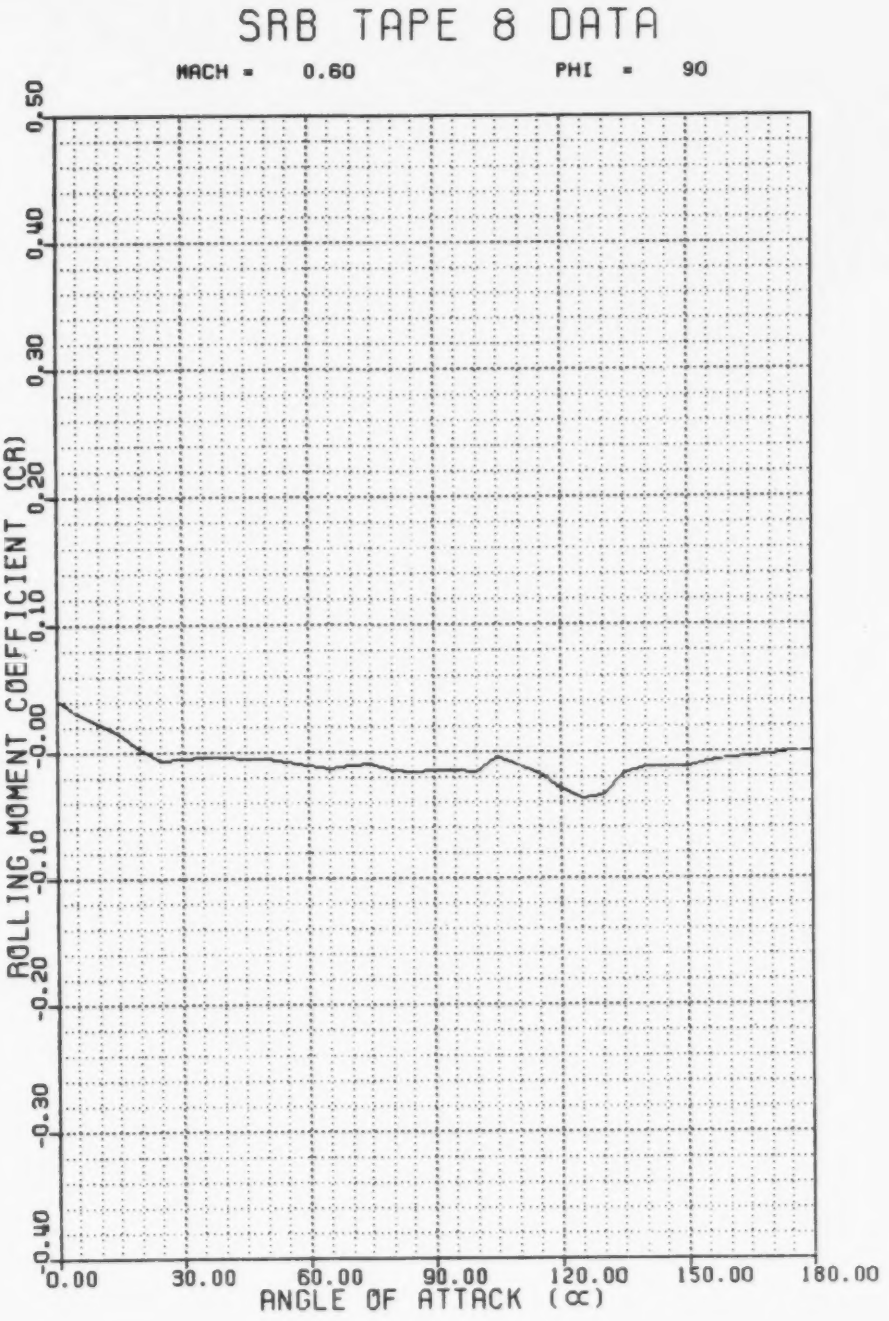
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 90
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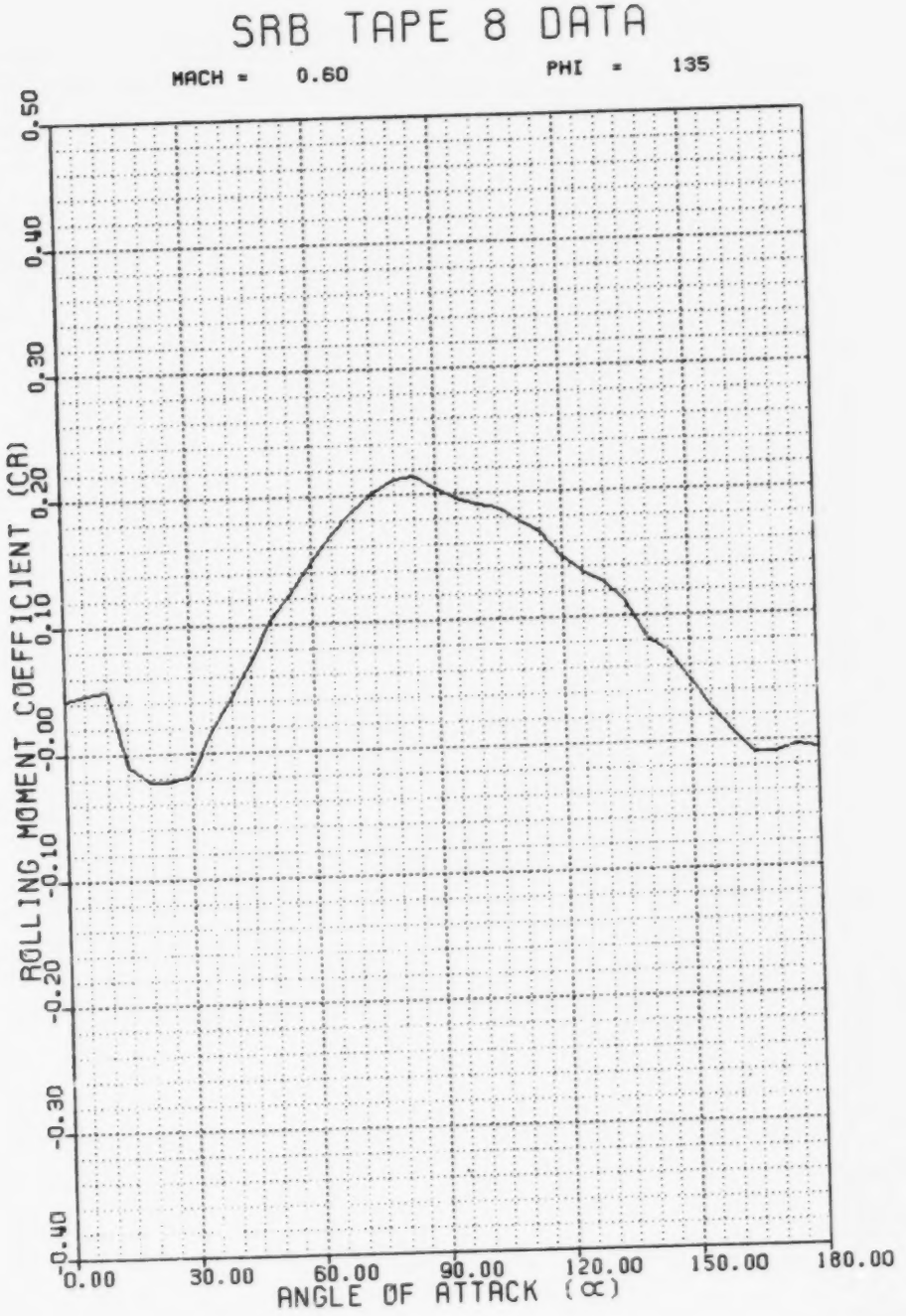
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
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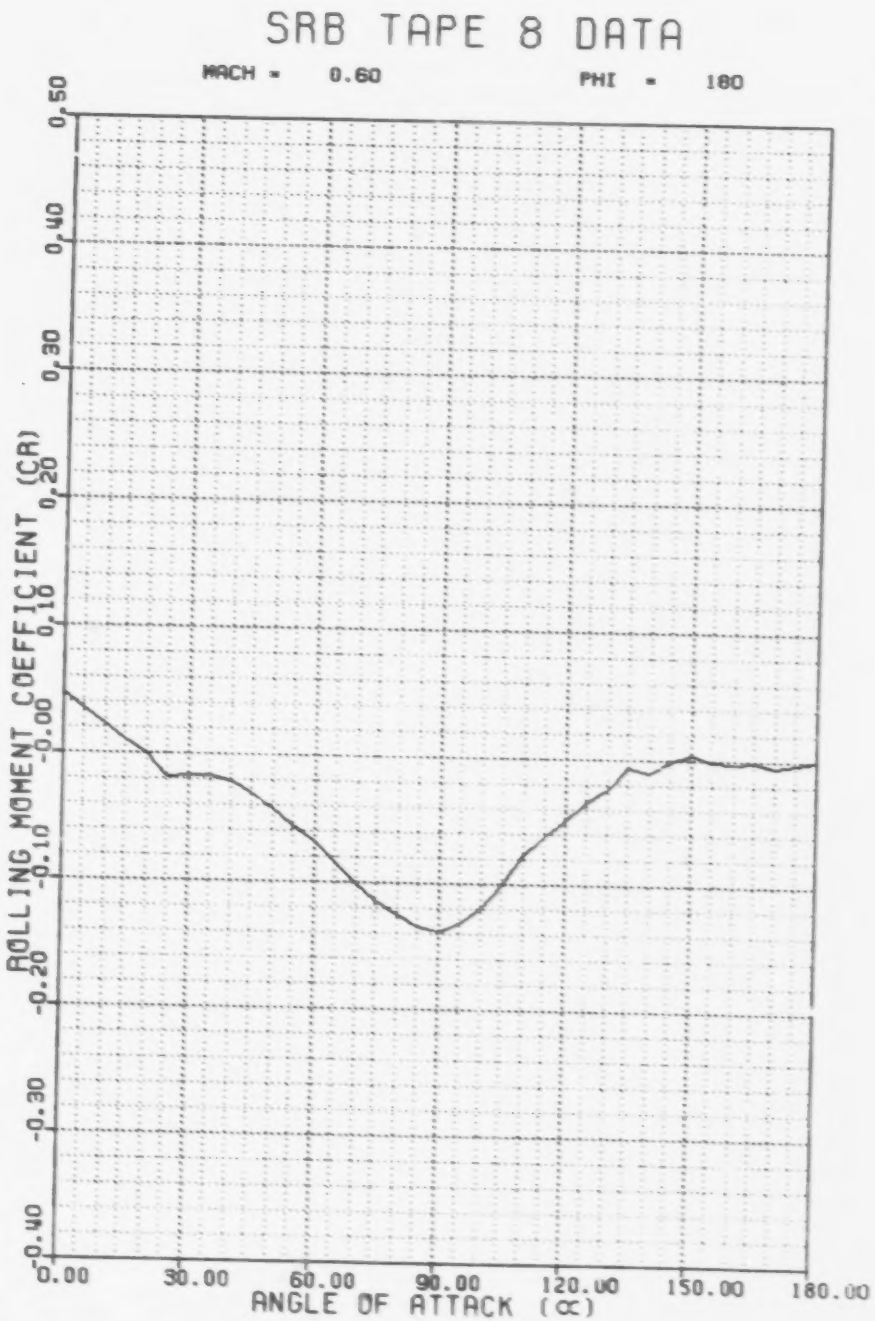
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
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0.00
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0.00
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90.00
120.00
150.00
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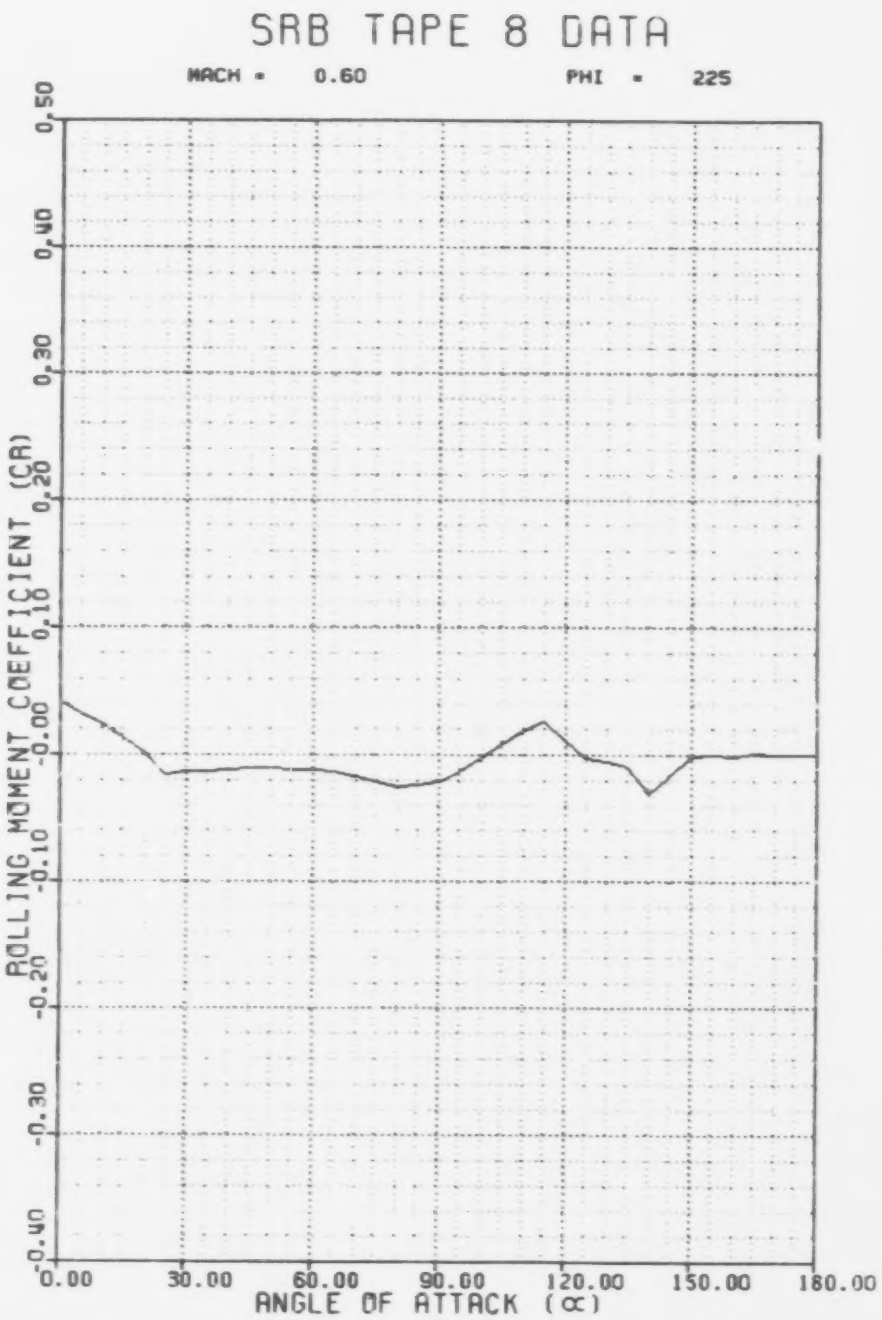
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
PHI = 225
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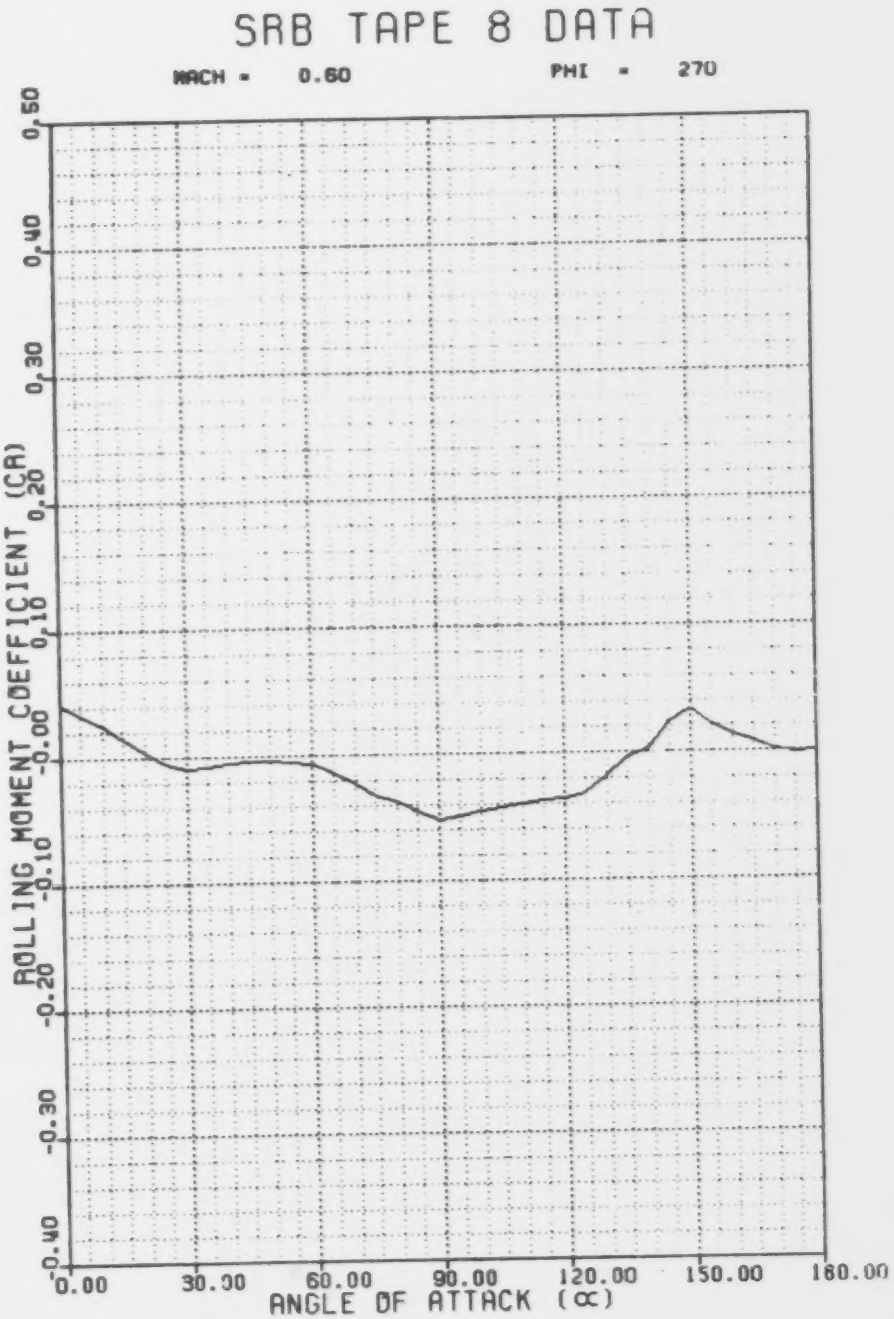
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.60
PHI = 270
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-0.10
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90.00
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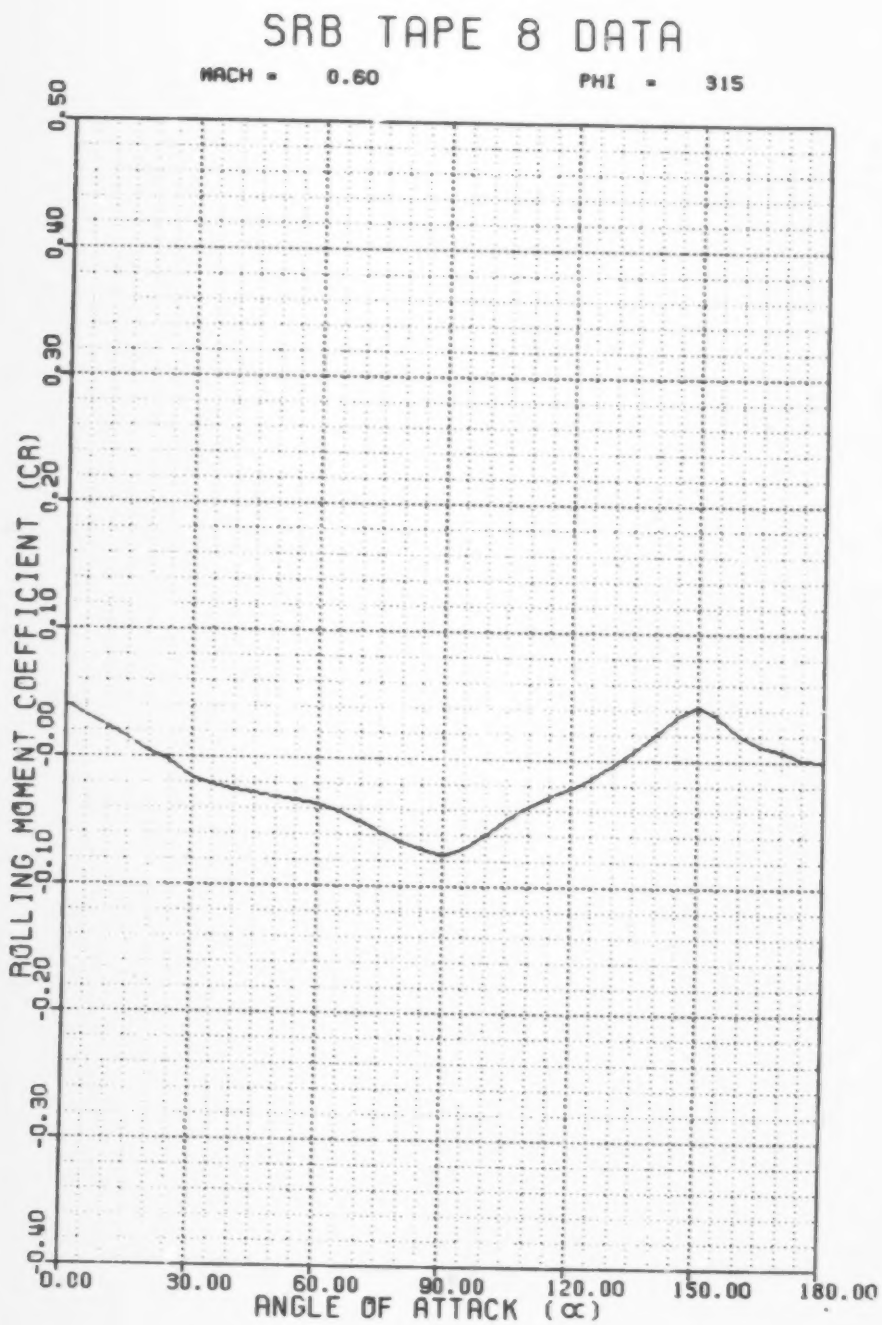
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 315
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-0.10
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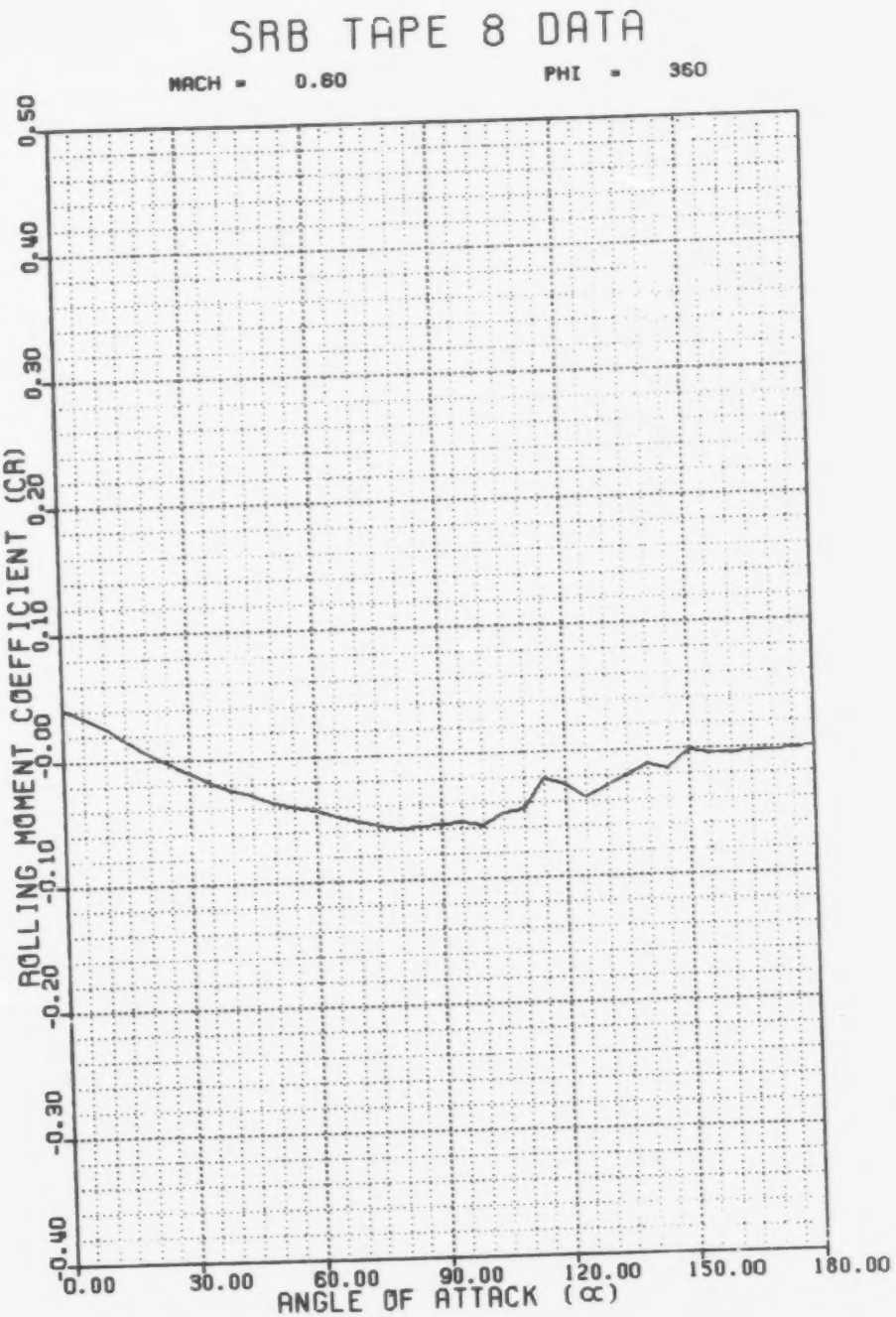
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
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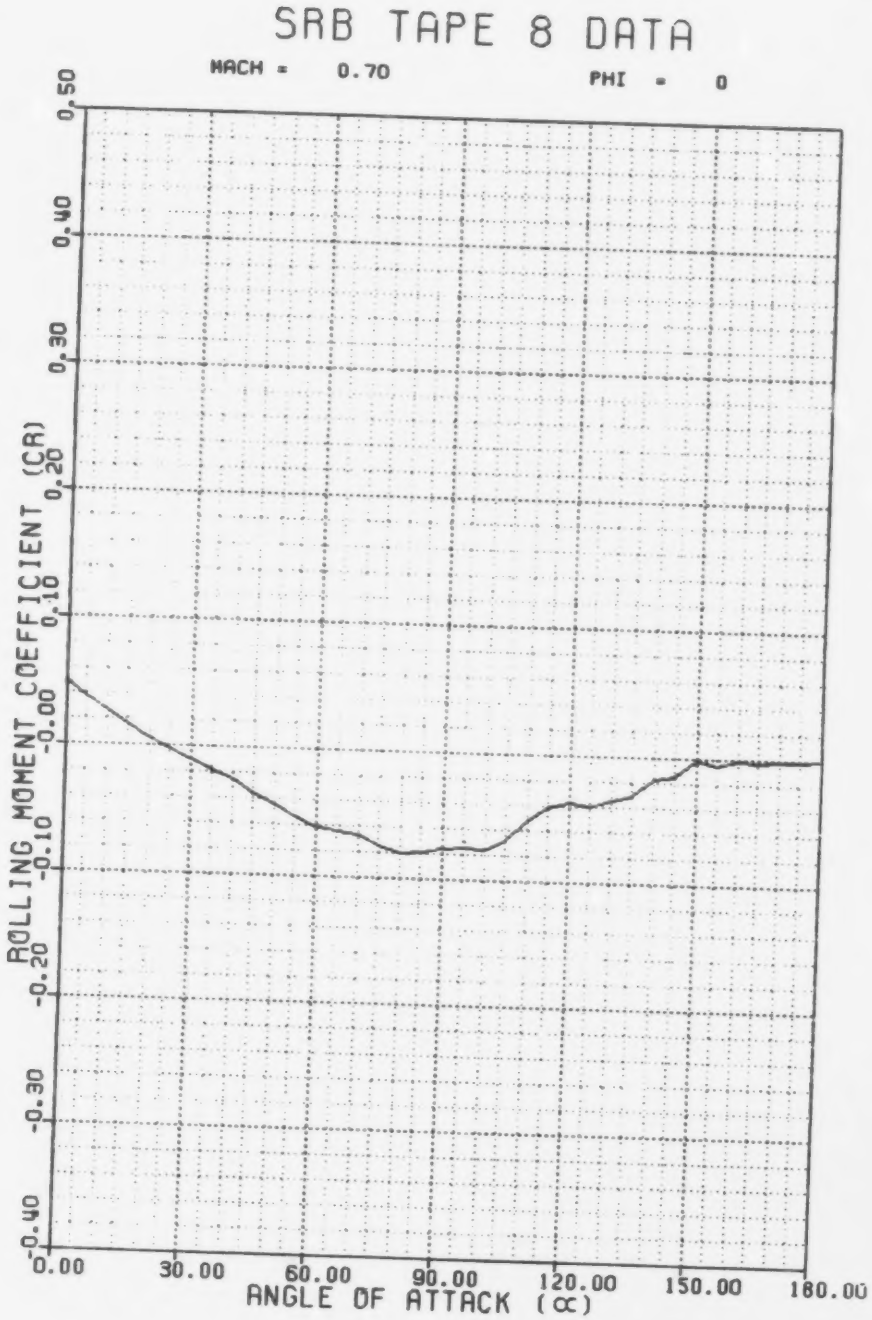
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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0.00
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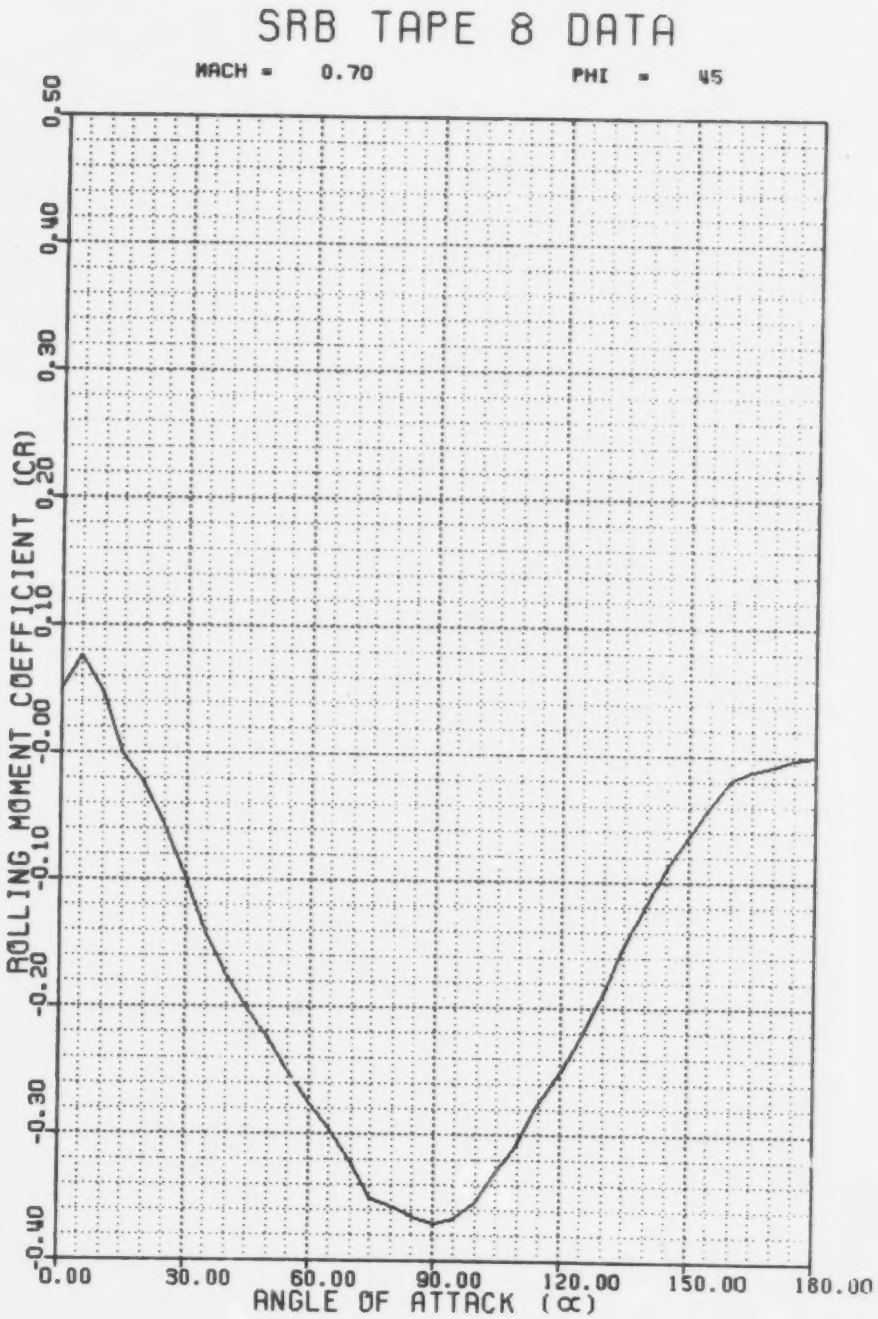
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
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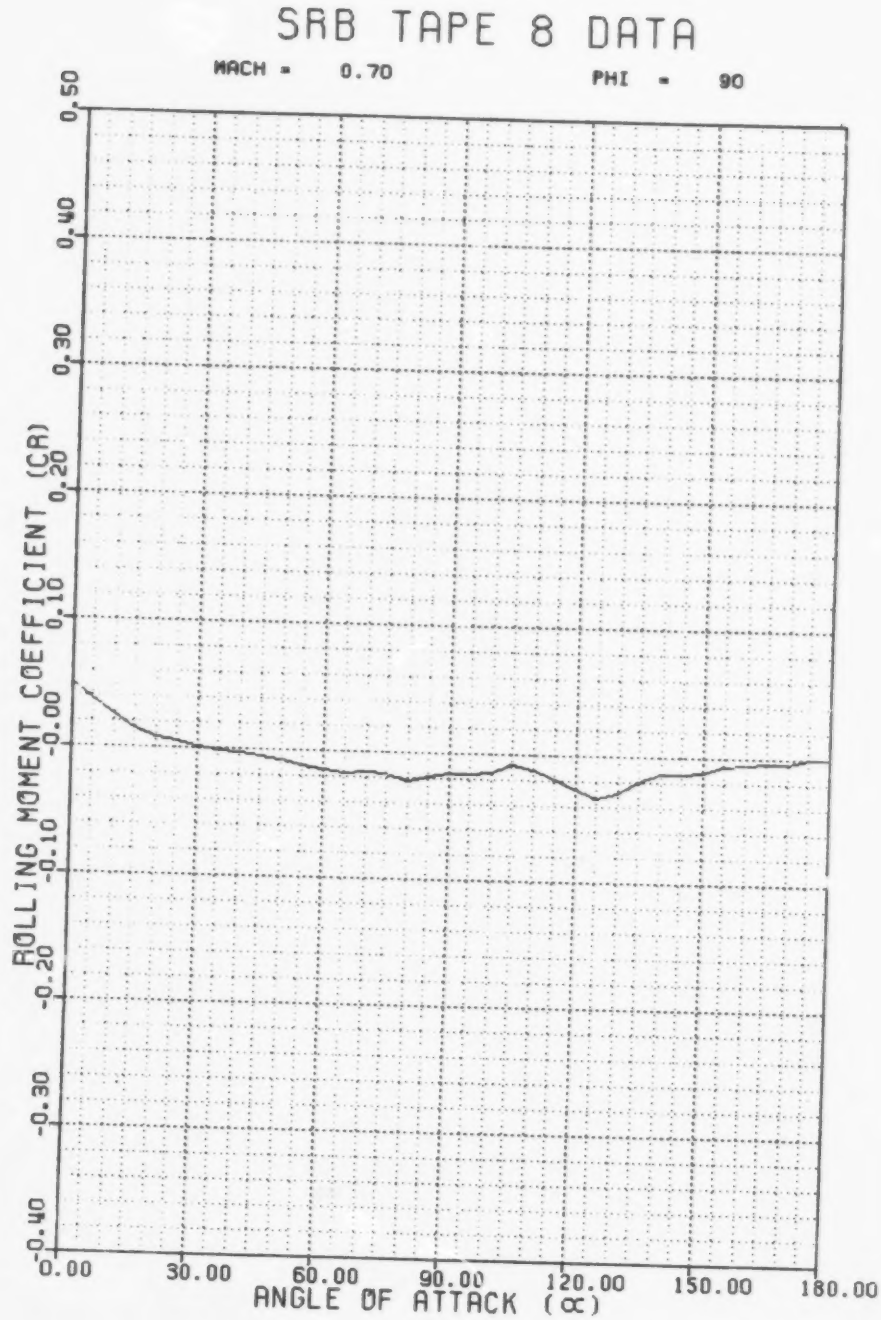
150.00
180.00
ANGLE OF ATTACK (α)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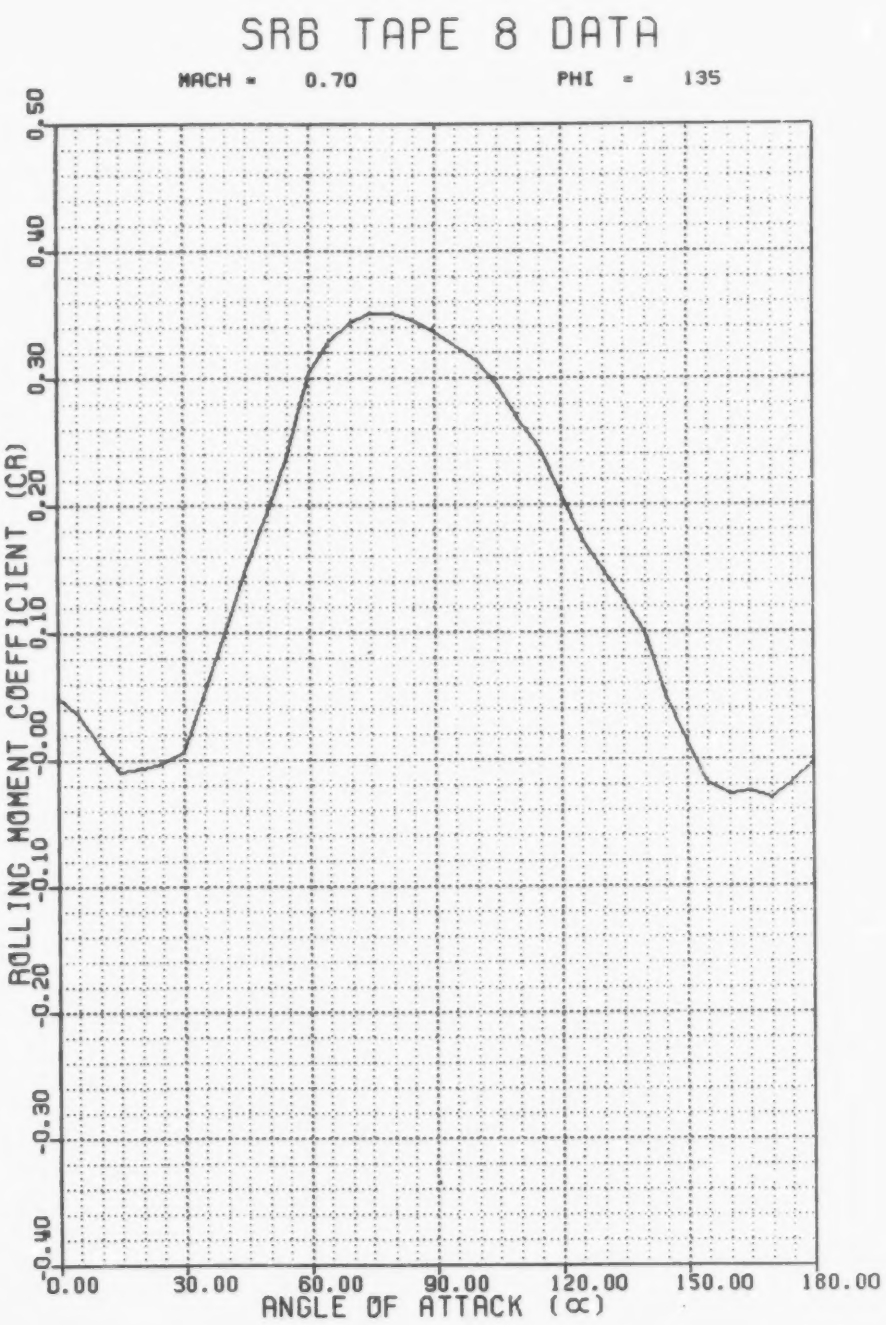
180.00
ANGLE OF ATTACK (α)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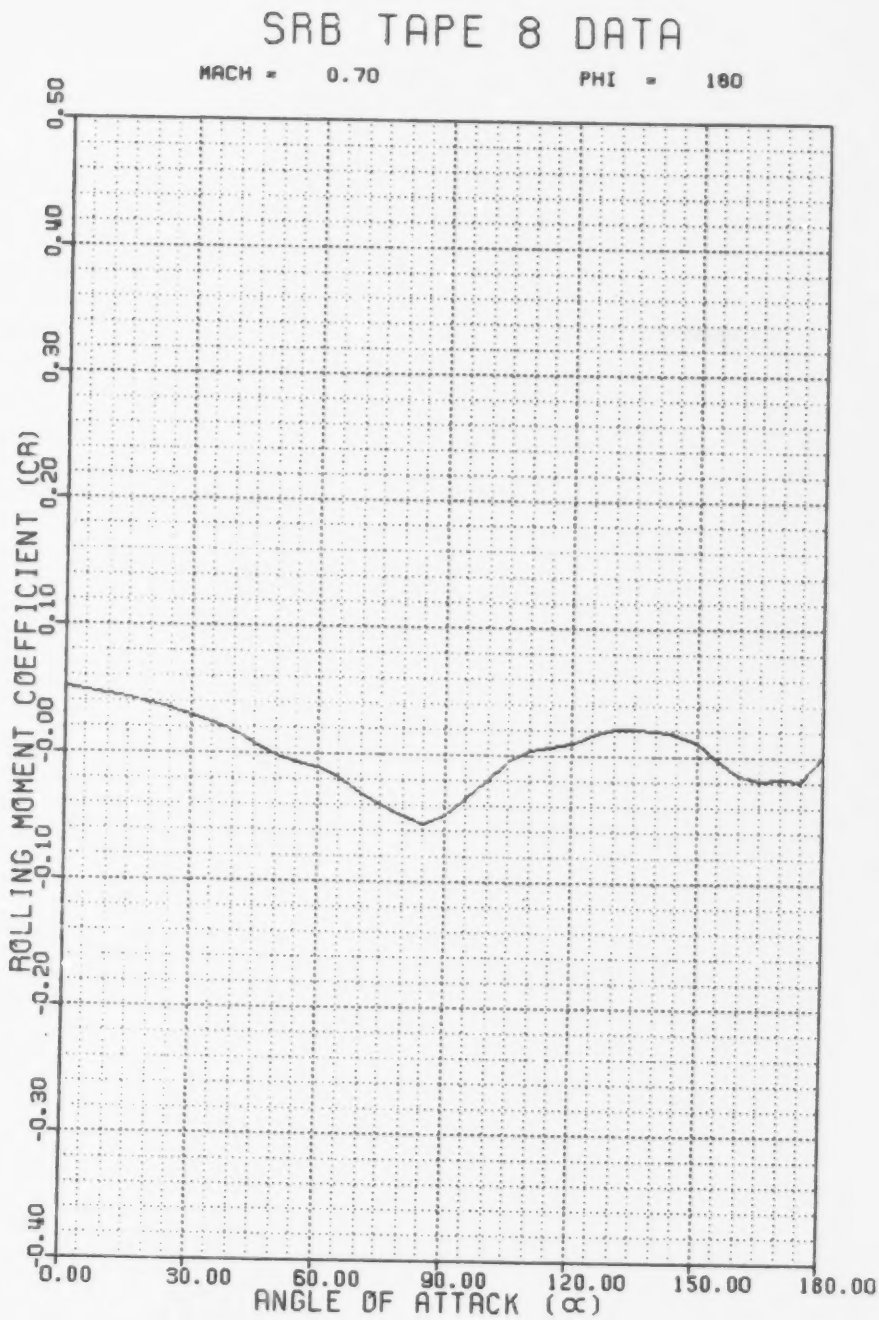
180.00
ANGLE OF ATTACK (α)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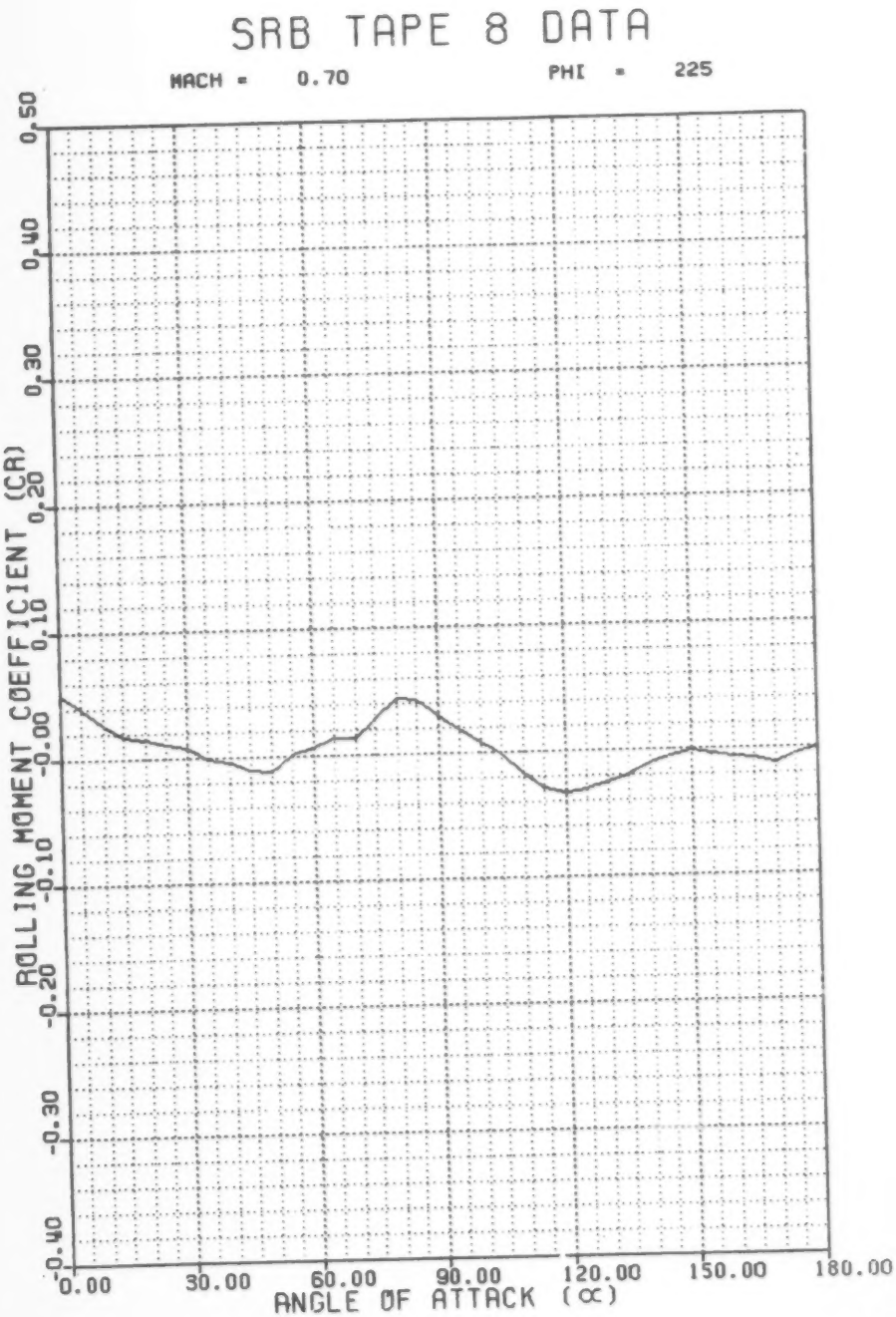
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.70
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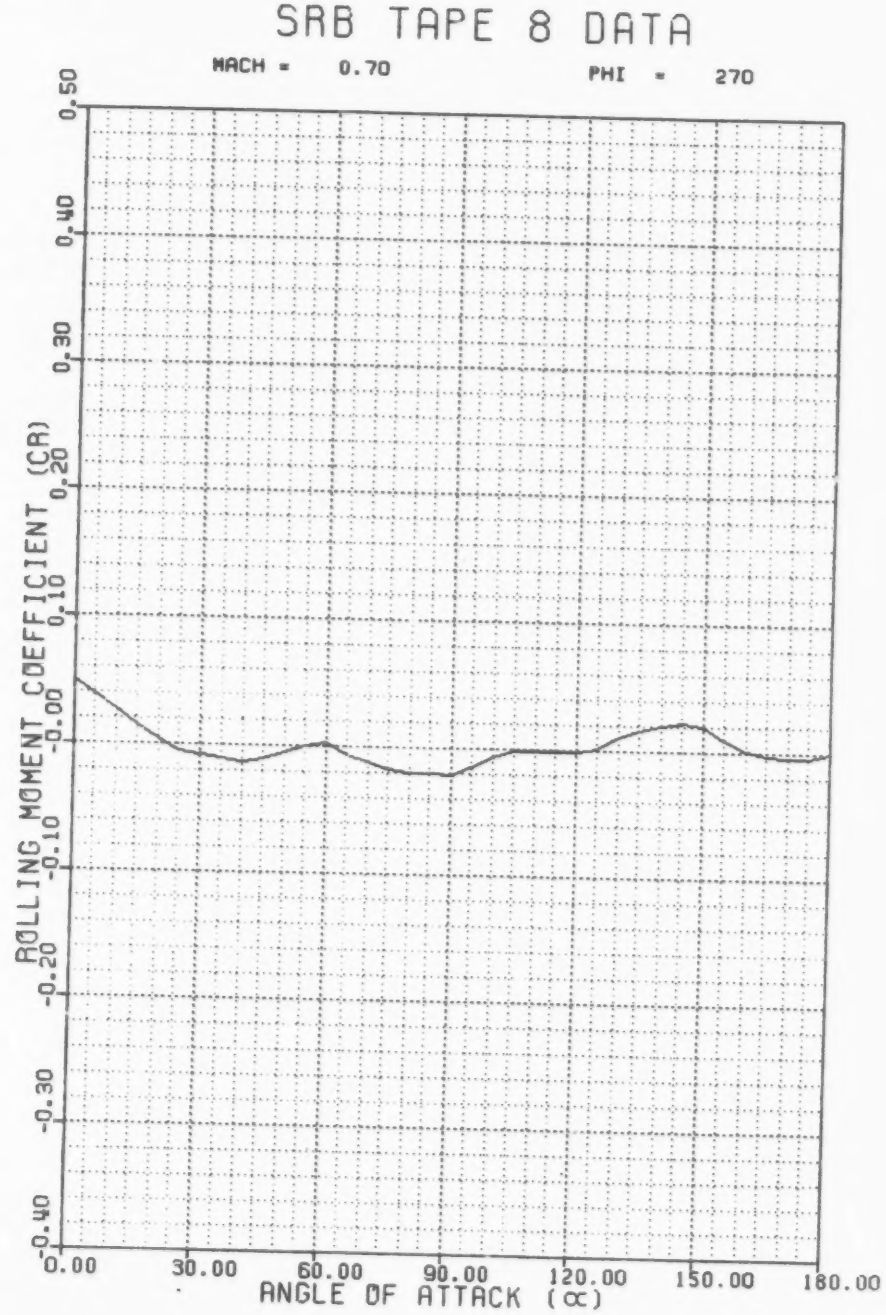
120.00
150.00
180.00
ANGLE OF ATTACK (α)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-0.20
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30.00
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90.00
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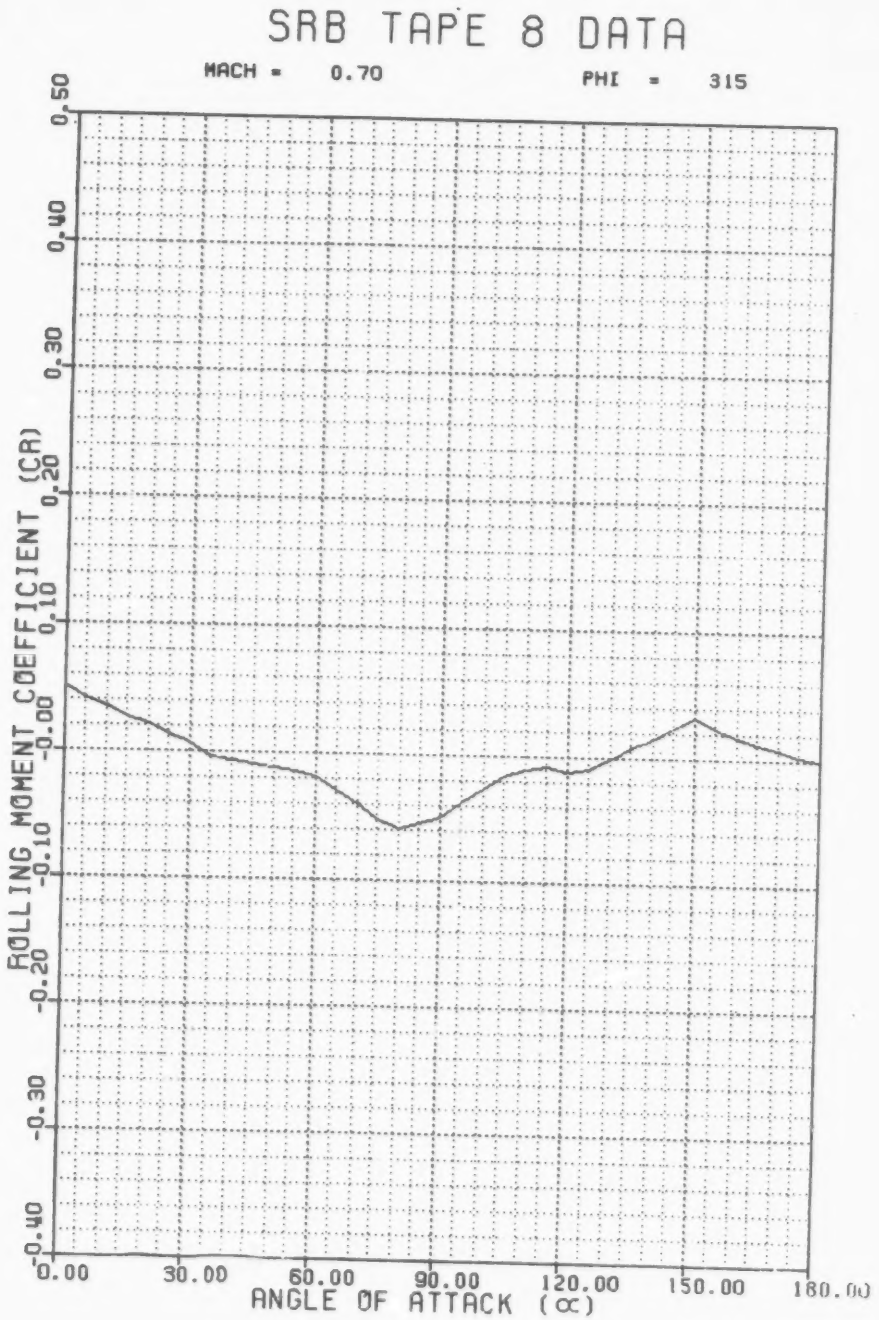
150.00
180.00
ANGLE OF ATTACK (α)

B-763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0.00
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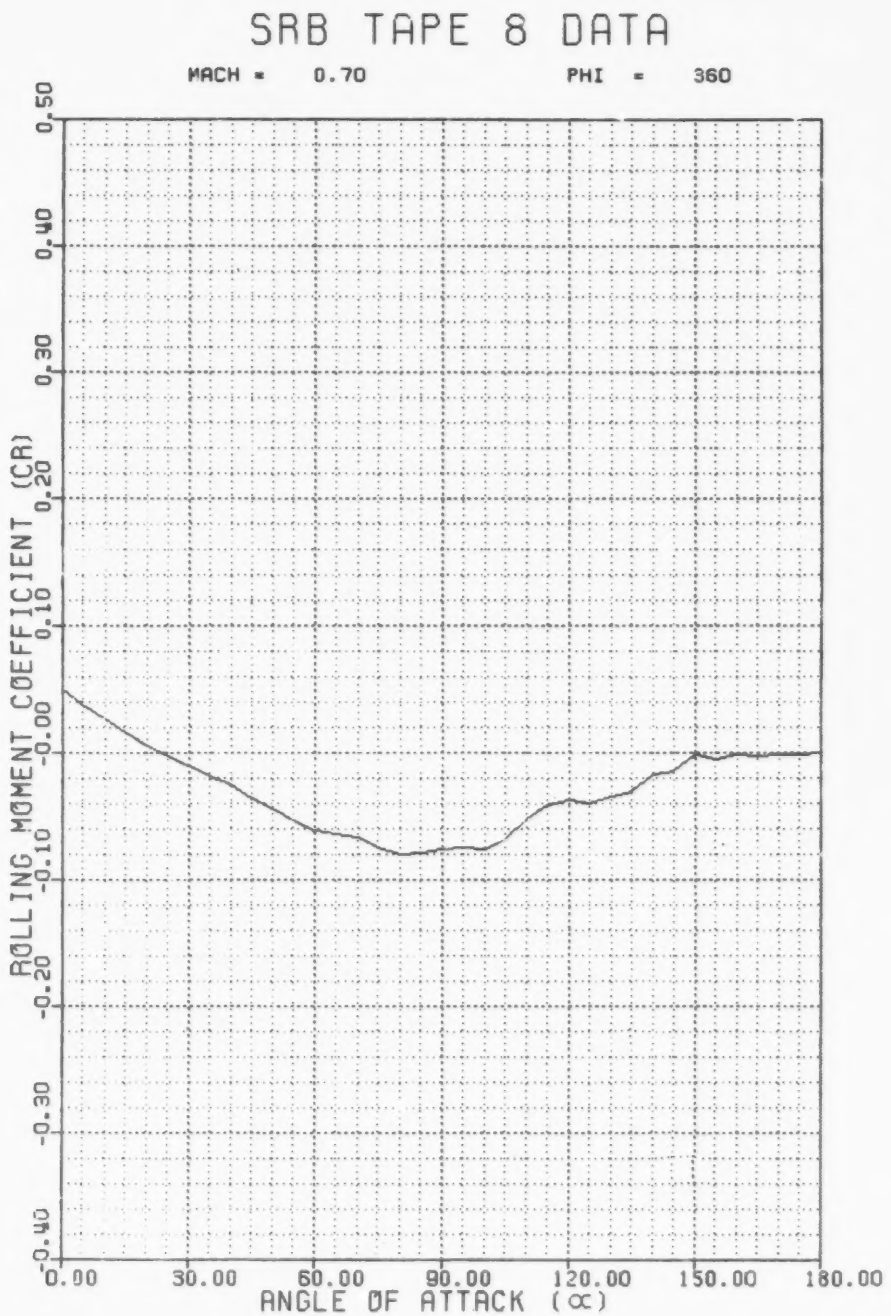
120.00
150.00
180.00
ANGLE OF ATTACK (α)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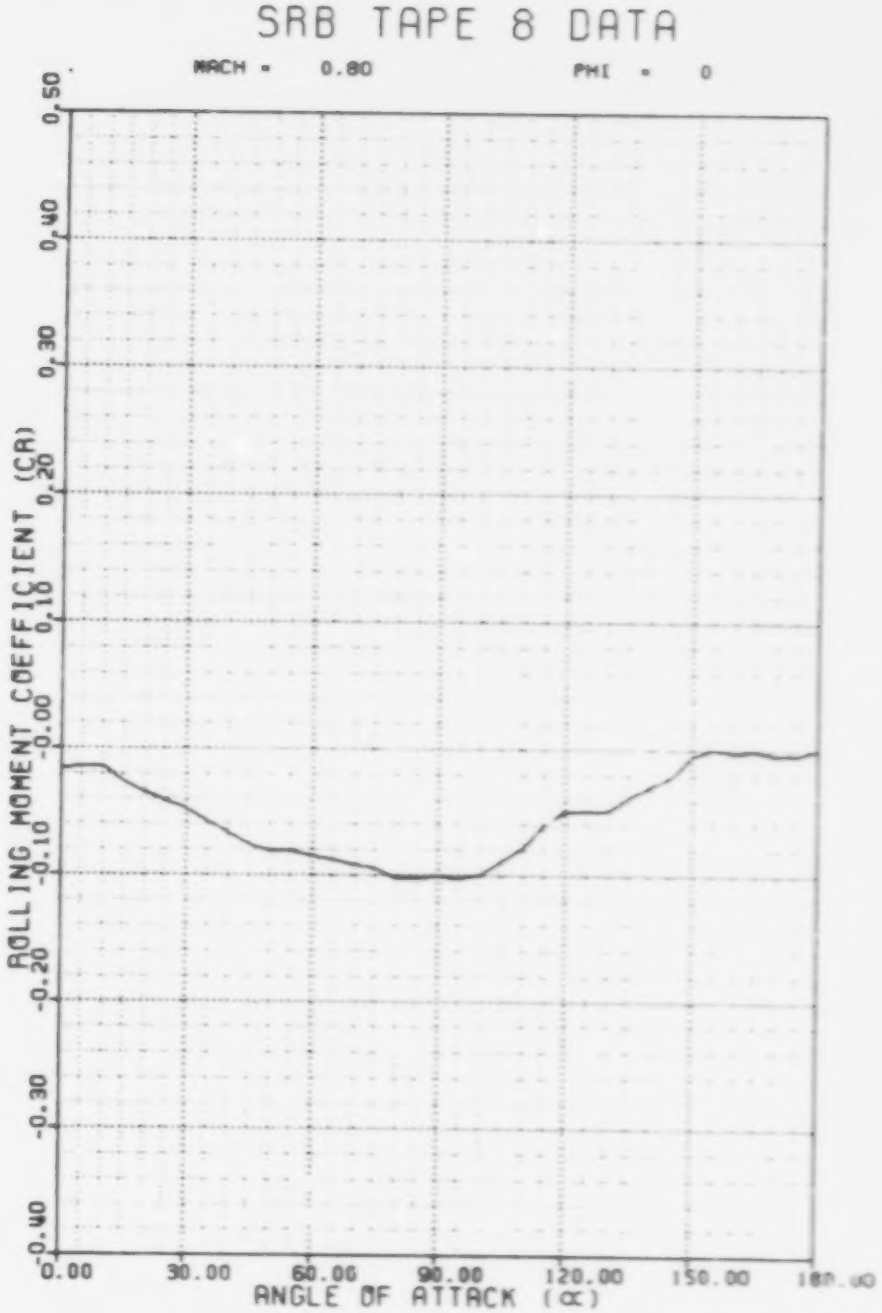
150.00
180.00
ANGLE OF ATTACK (α)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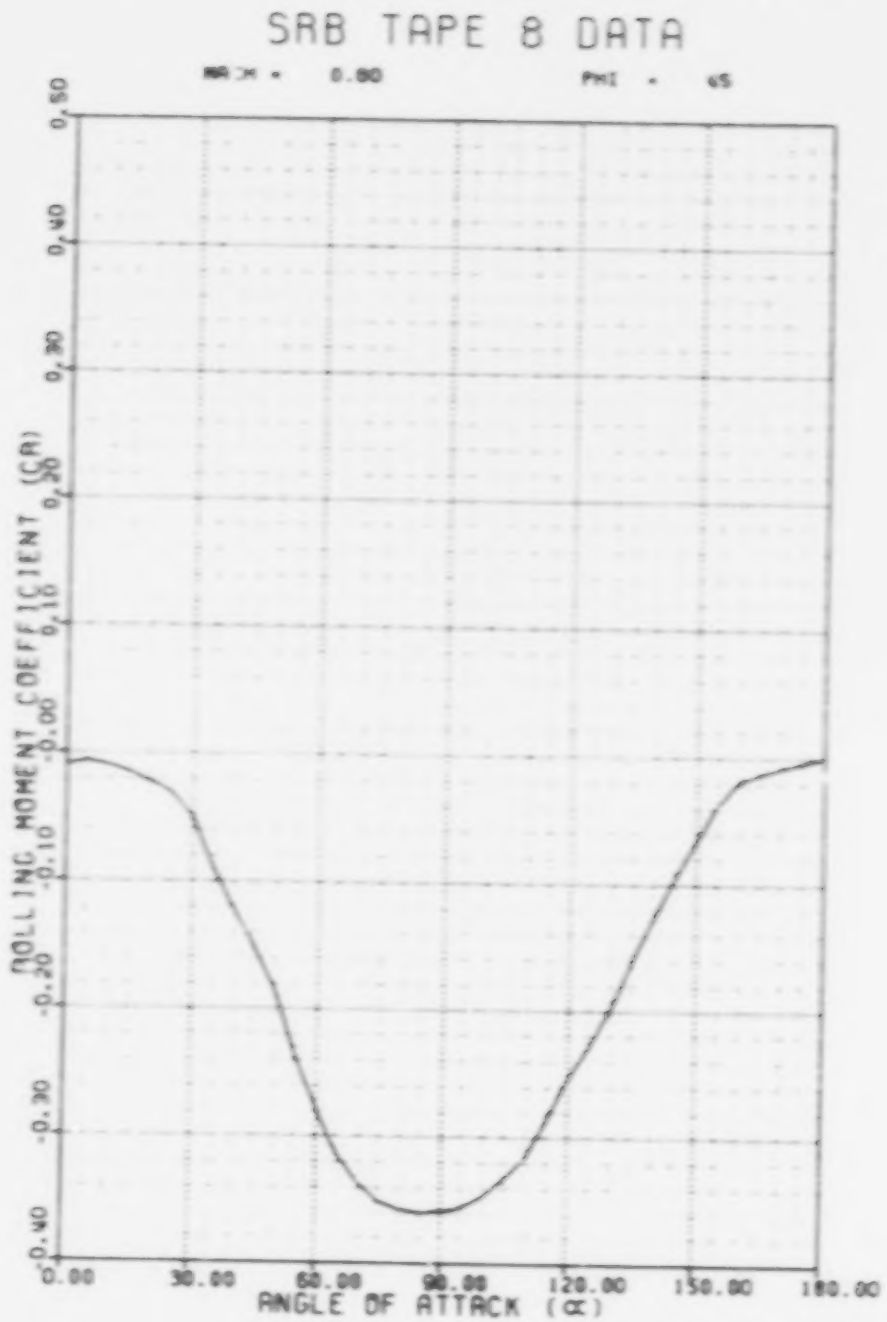
150.00
180.00
ANGLE OF ATTACK (α)

B-786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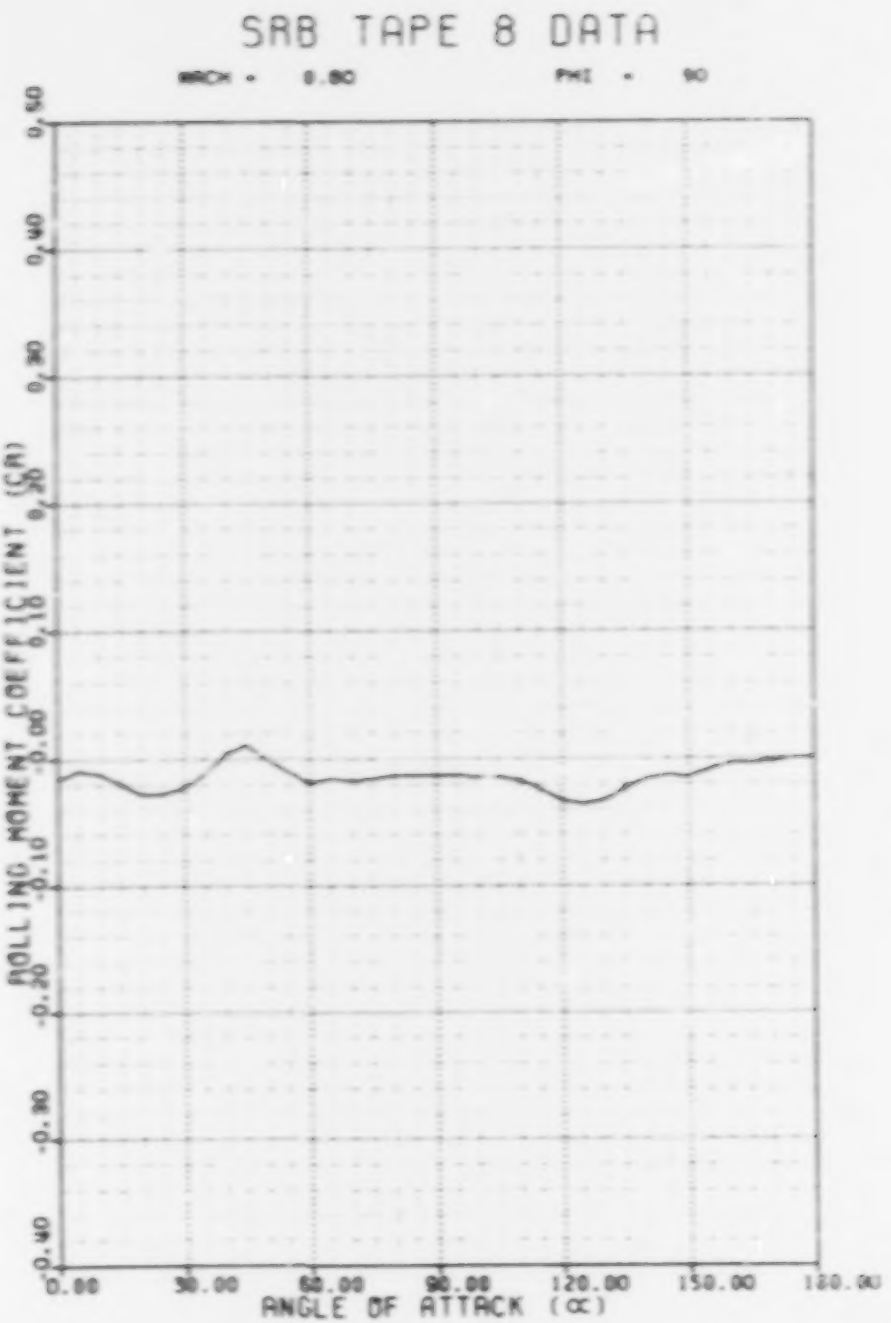
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI • 90
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-0.10
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0.00
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60.00
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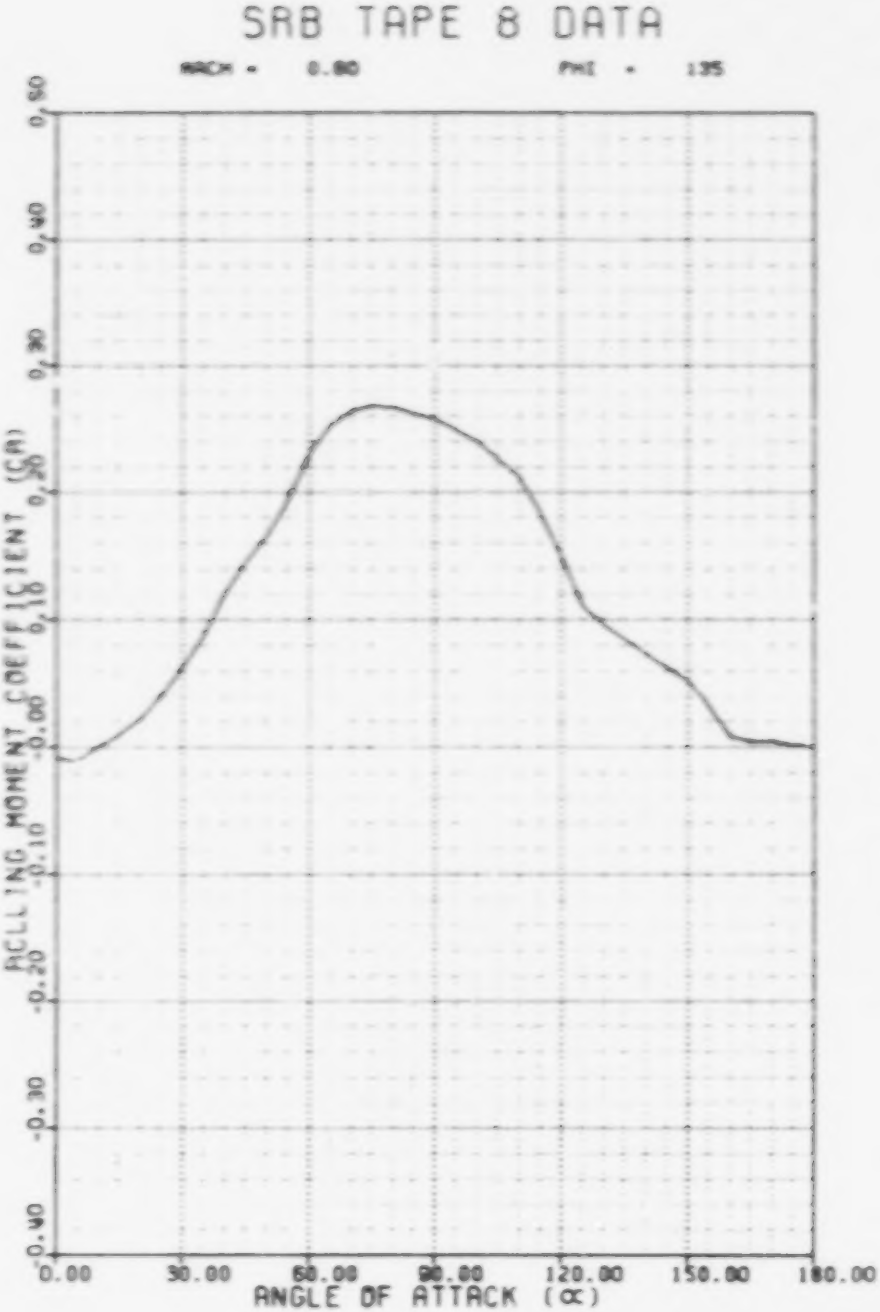
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 135
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90.00
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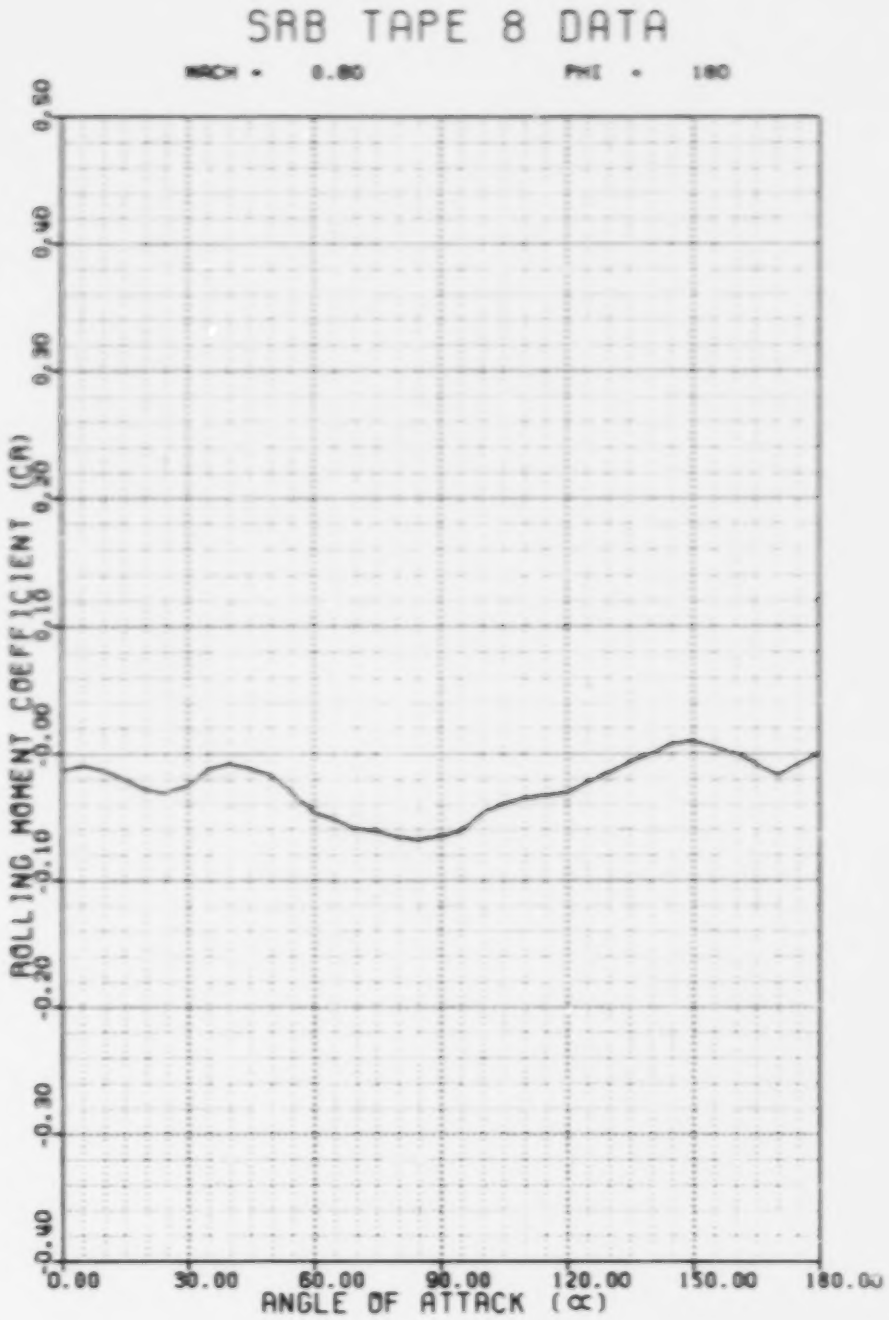
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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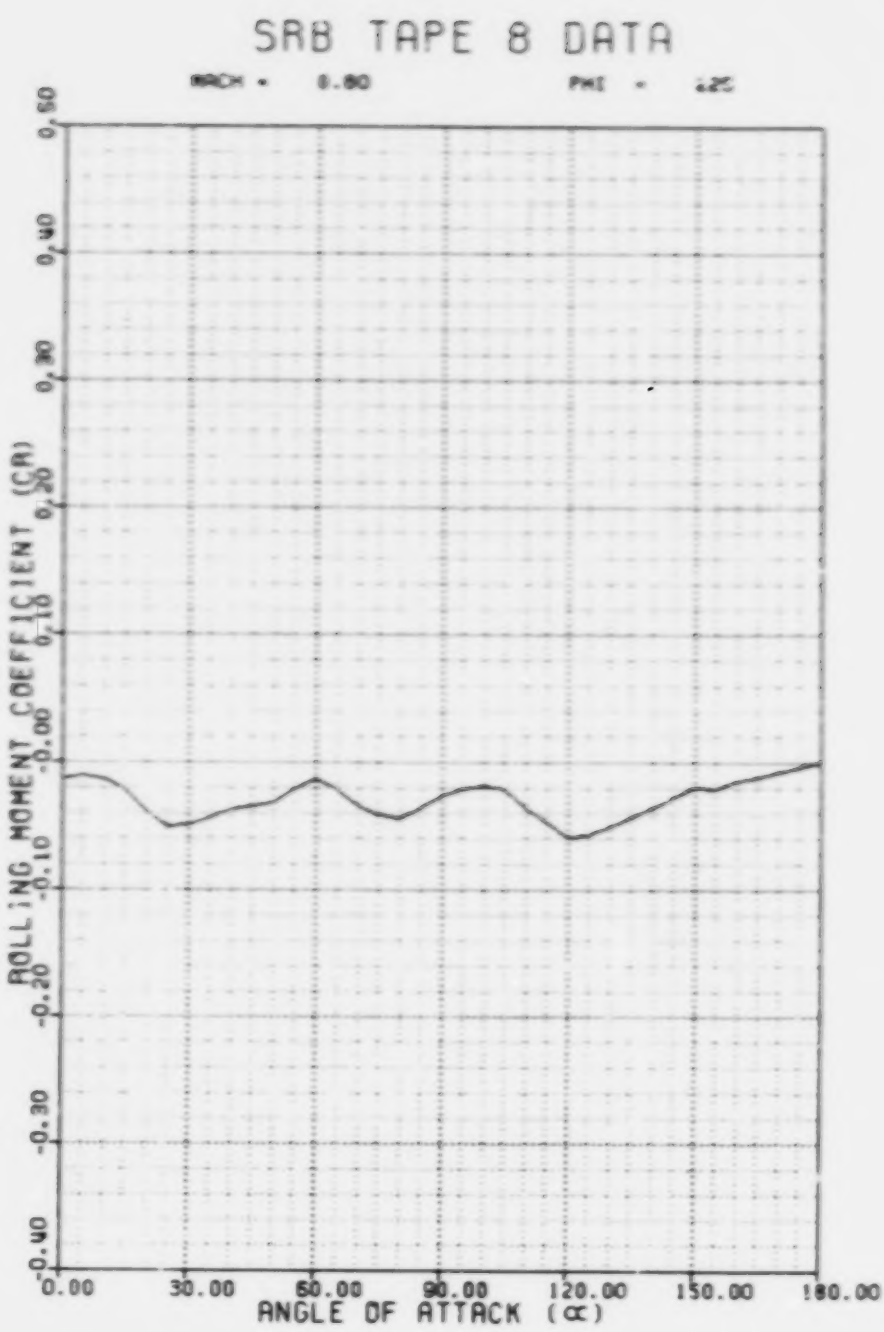
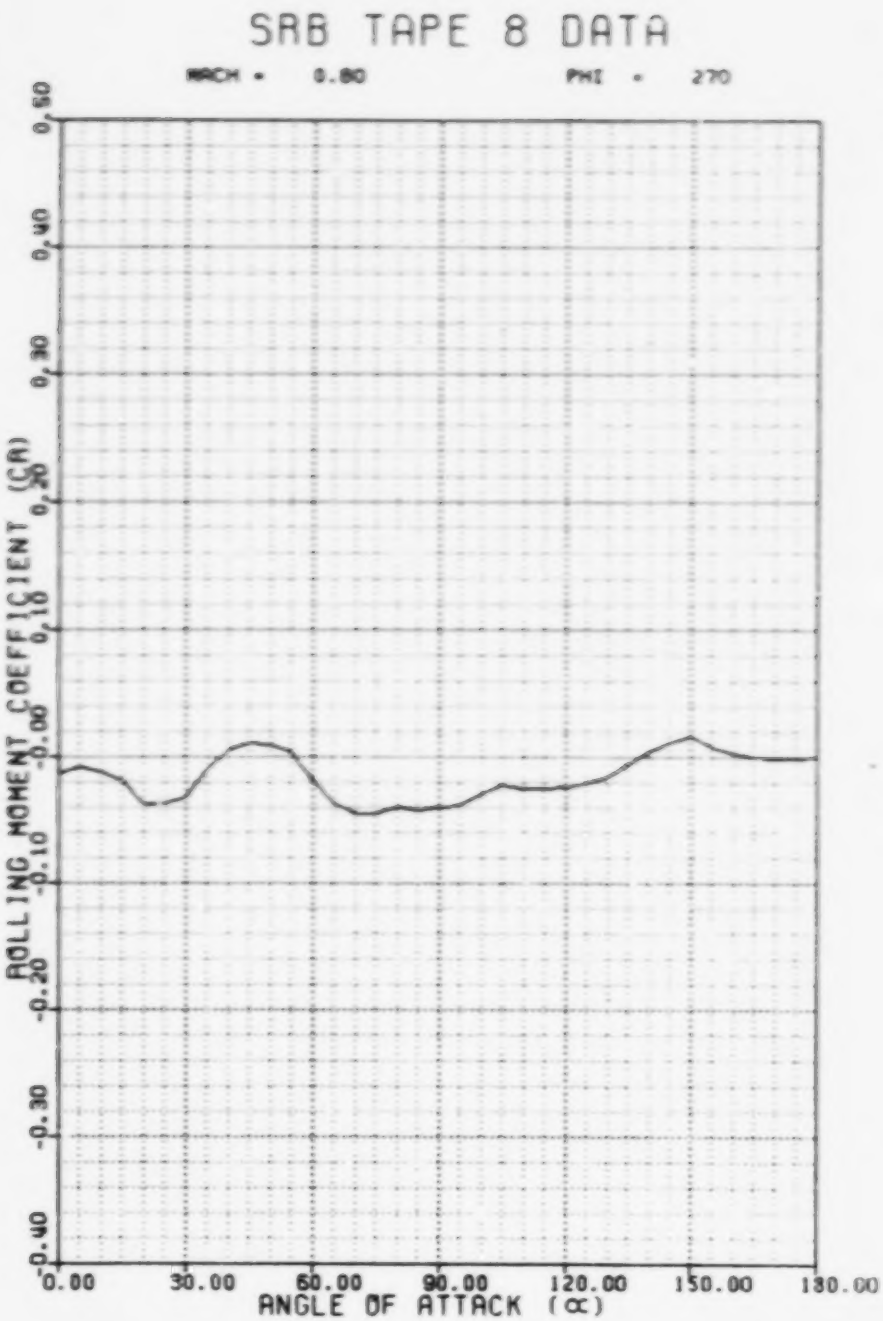
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH • 0.80
PHI • 270
ROLLING MOMENT COEFFICIENT (CA)
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0.30
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-0.00
-0.10
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0.00
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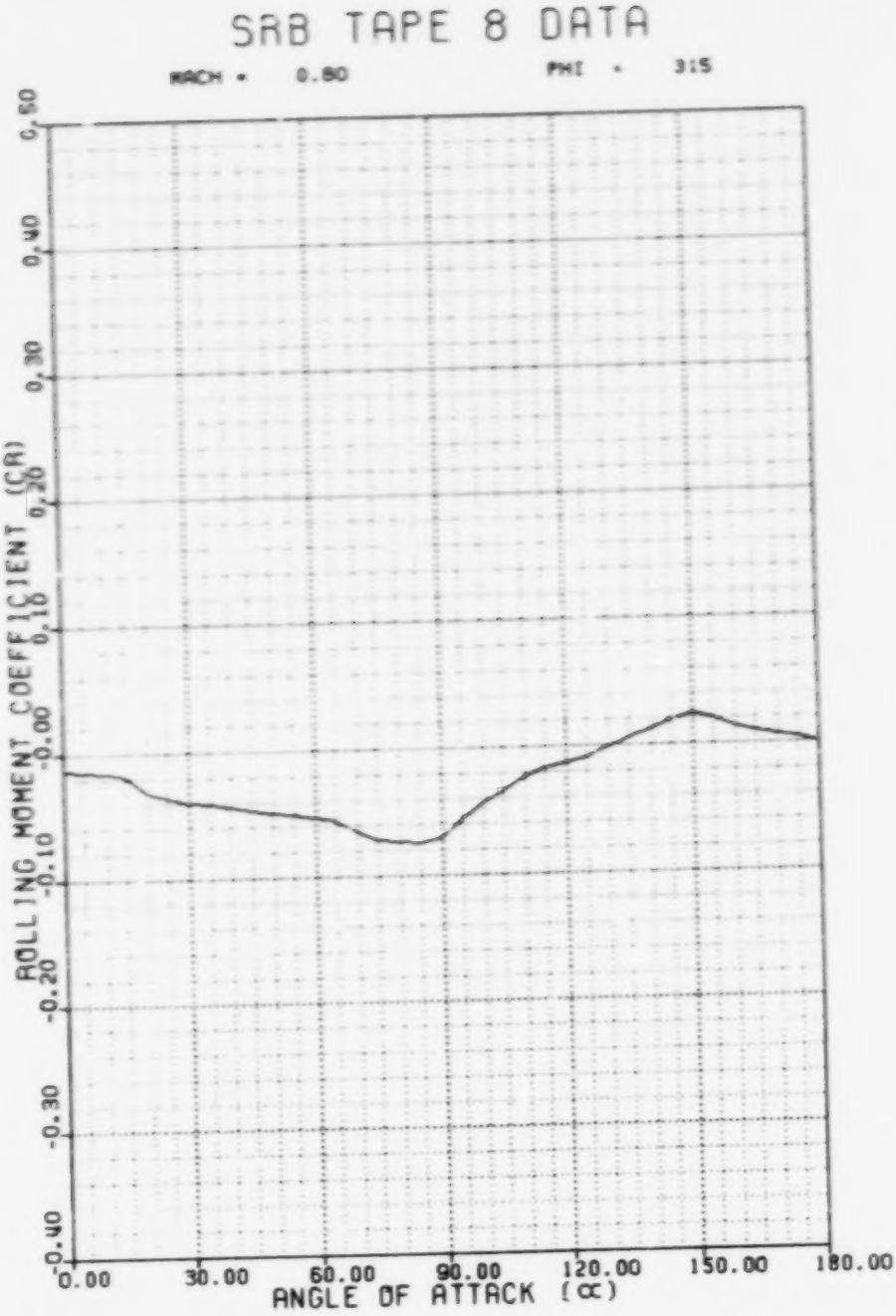
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 315
ROLLING MOMENT COEFFICIENT (CA)
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0.30
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0.10
-0.00
-0.10
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0.00
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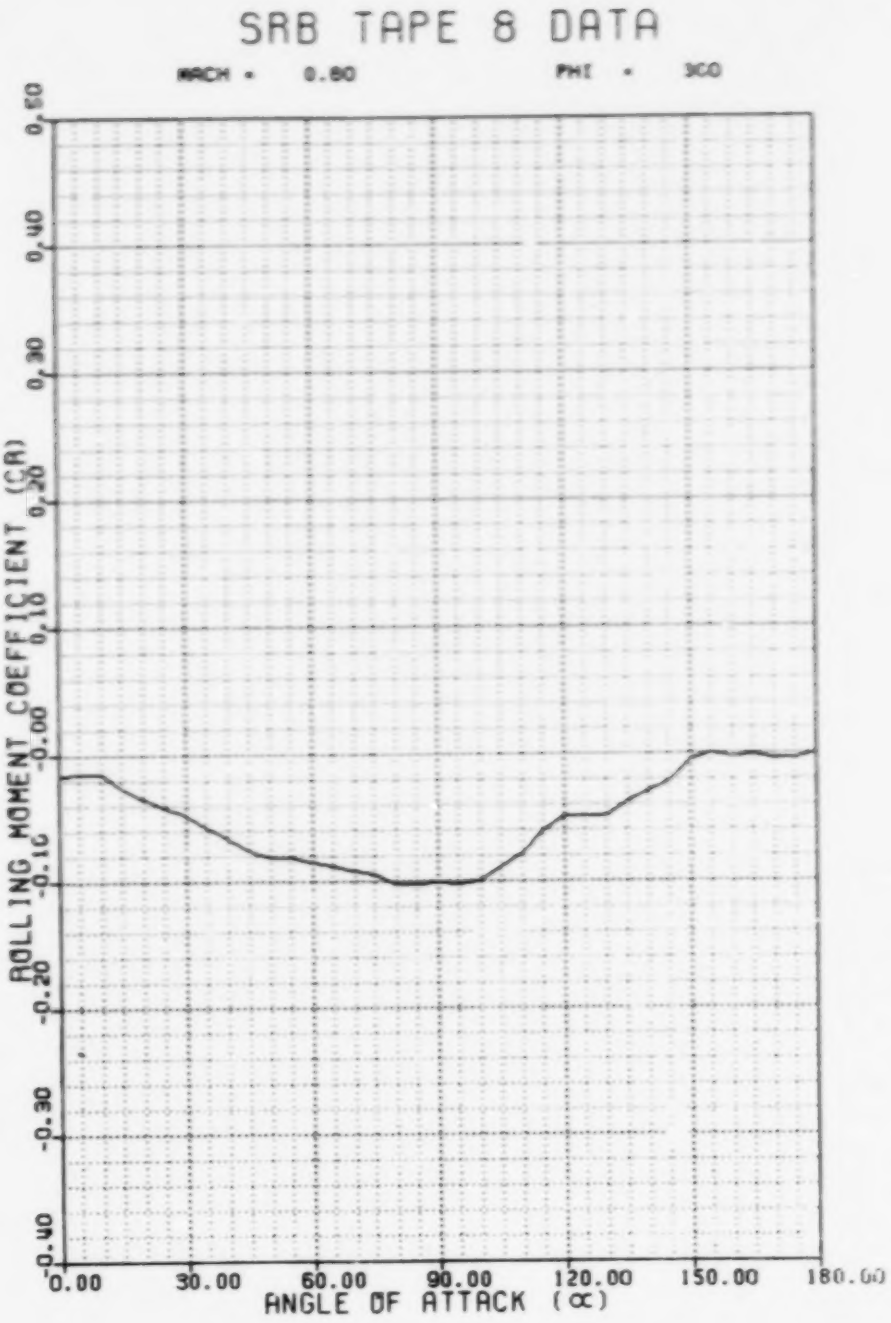
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.80
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
0.10
-0.00
-0.10
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0.00
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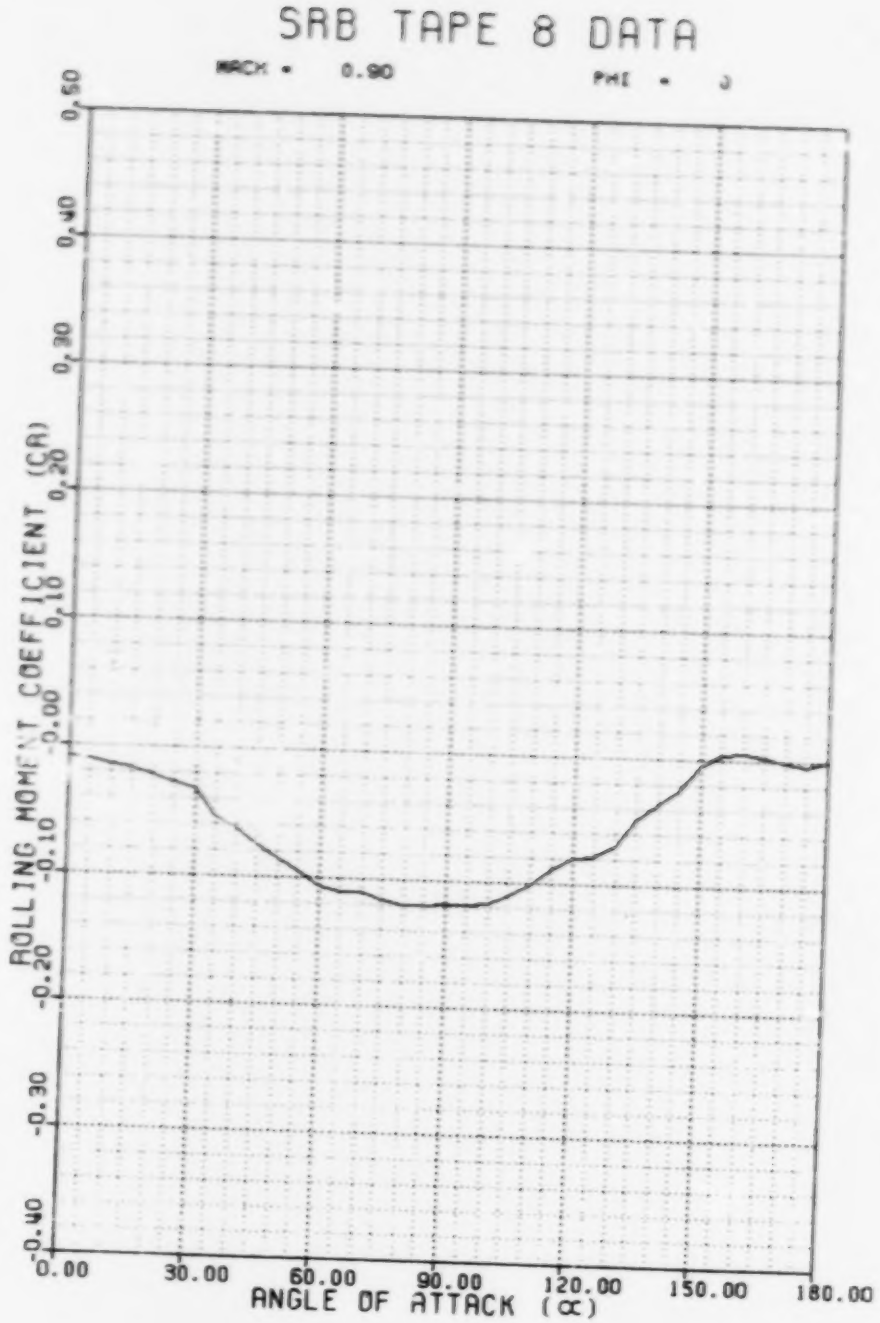
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 0
ROLLING MOMENT COEFFICIENT (CA)
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0.30
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0.10
0.00
-0.10
-0.20
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0.00
30.00
60.00
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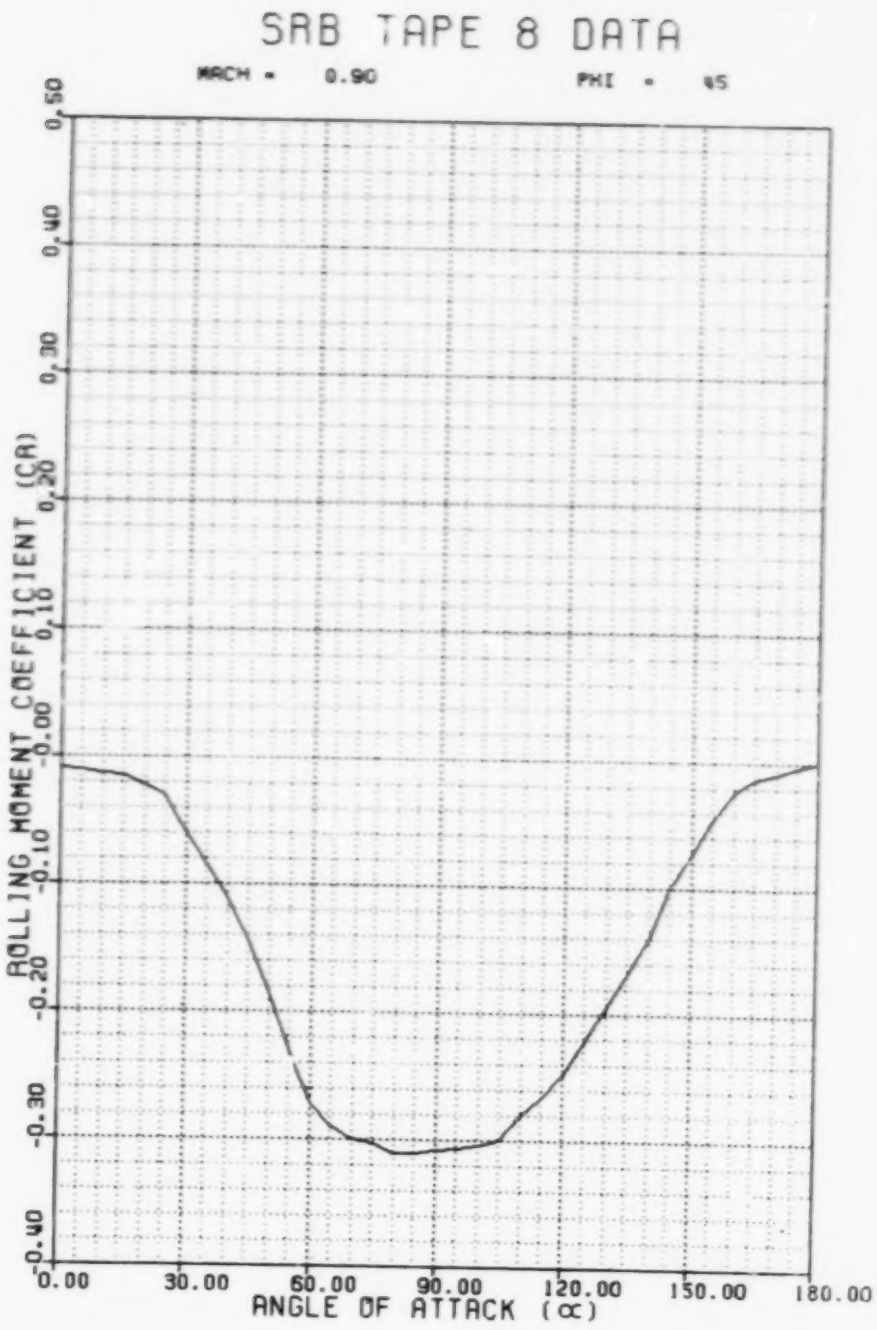
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 0.90
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-0.00
-0.10
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0.00
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120.00
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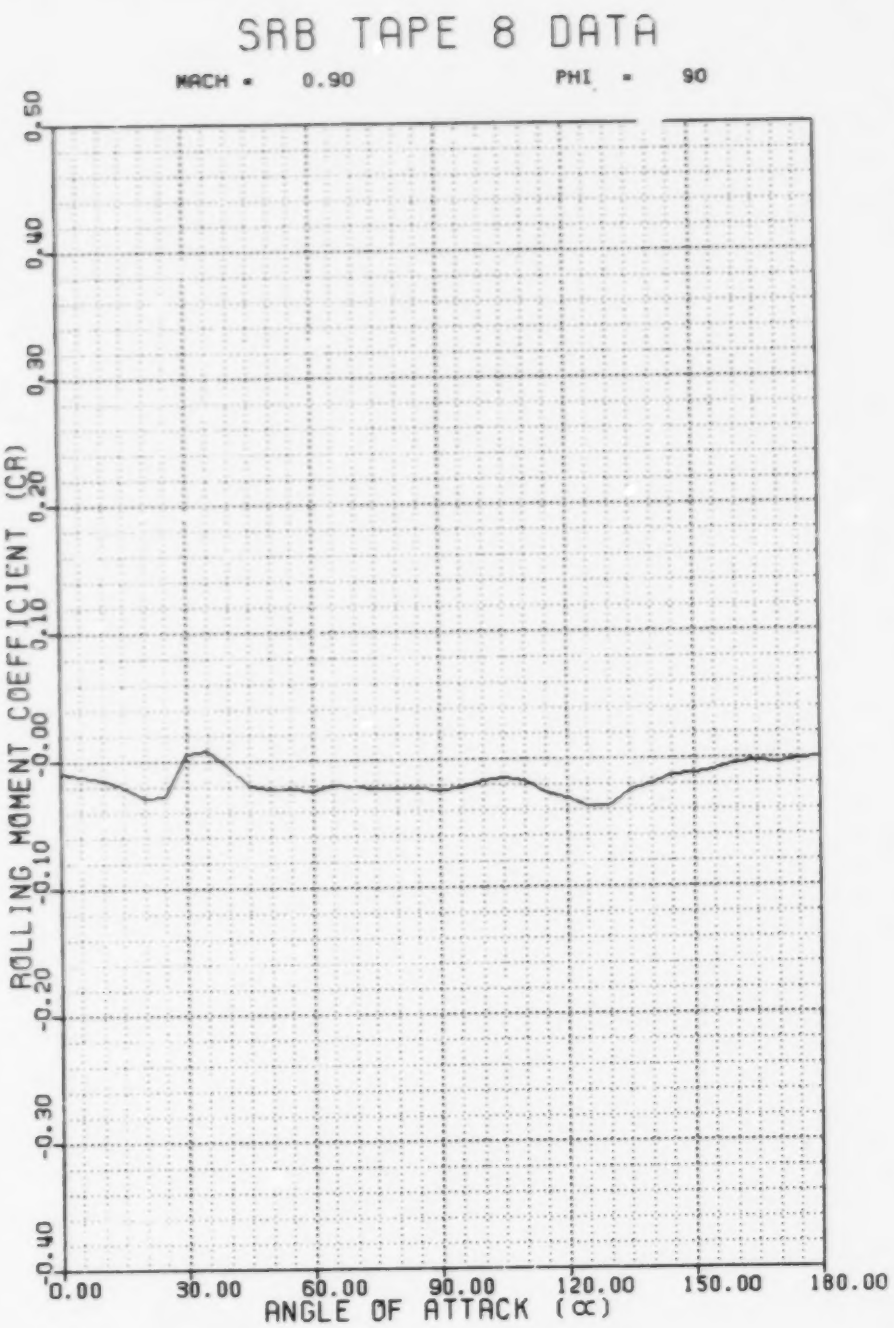
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 90
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0.10
-0.00
-0.10
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0.00
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60.00
90.00
120.00
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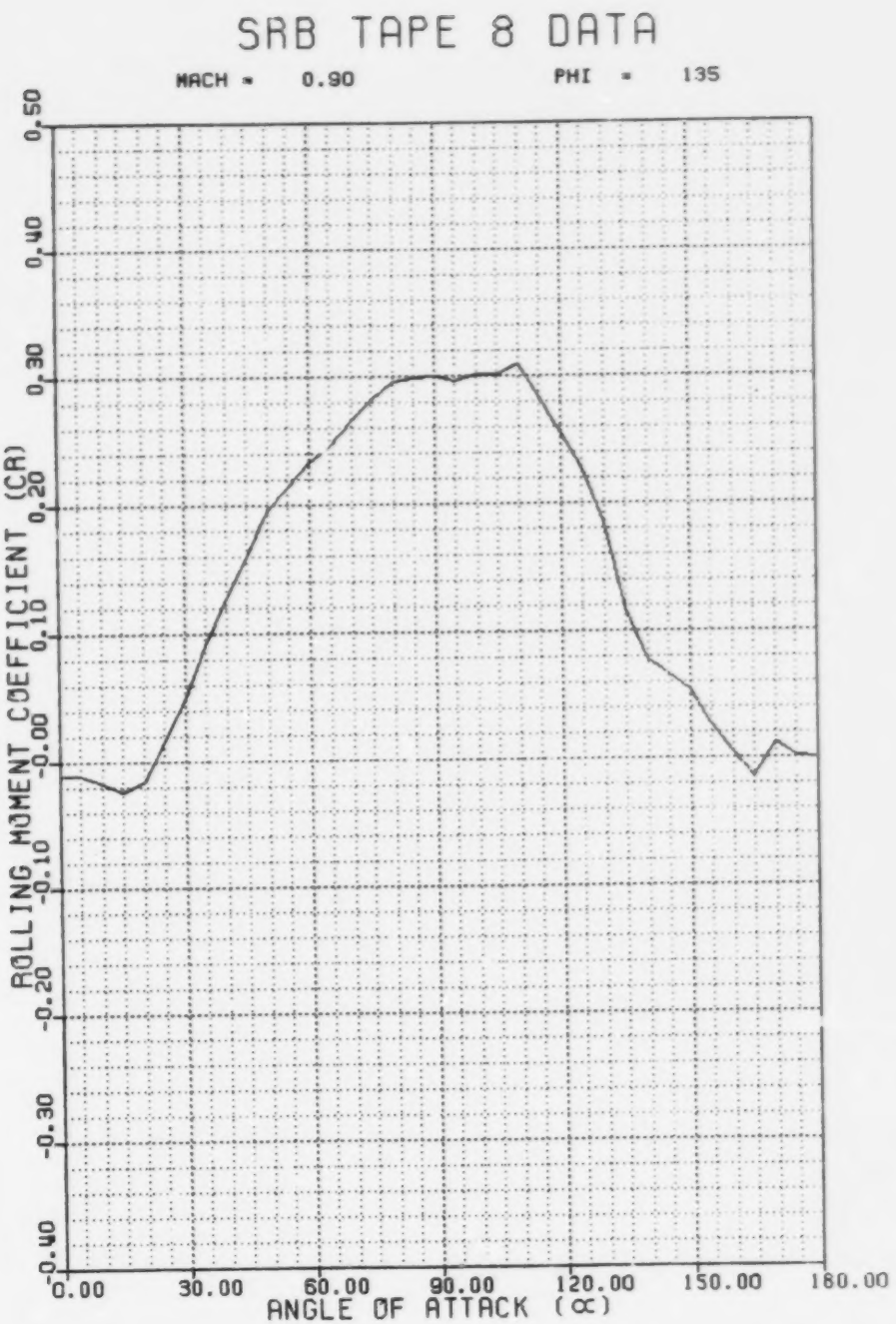
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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0.30
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-0.00
-0.10
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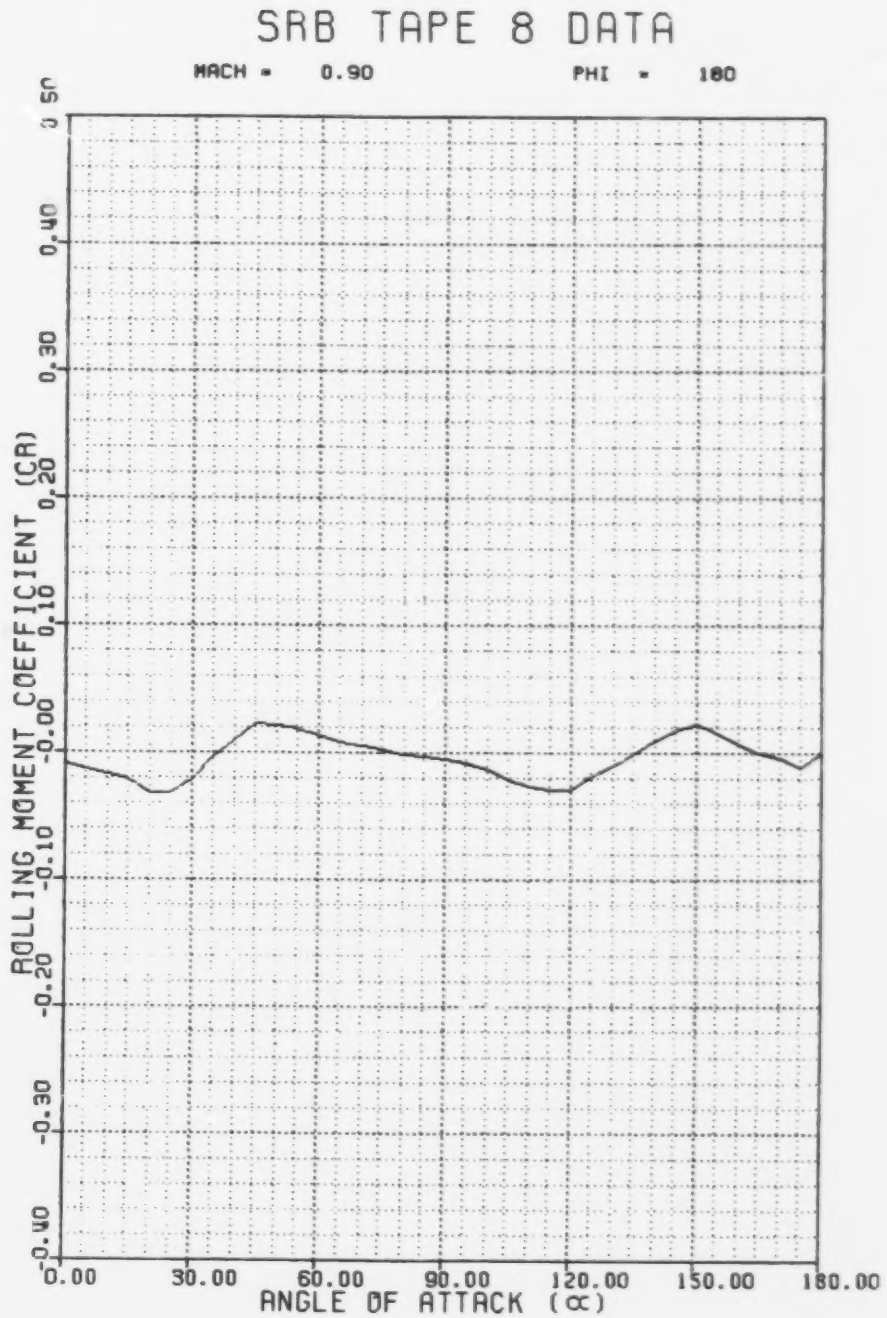
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
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-0.00
-0.10
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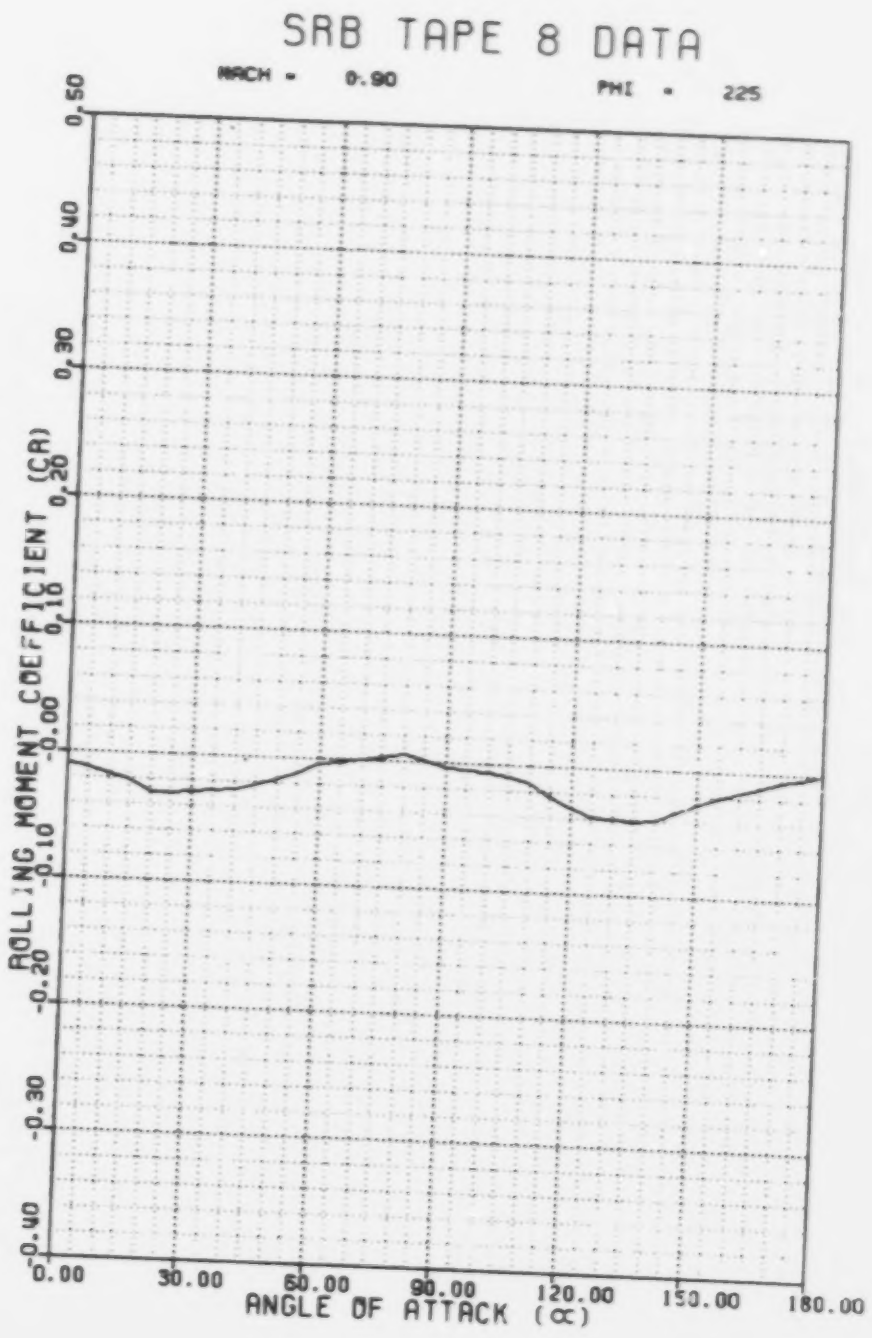
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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-0.10
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0.00
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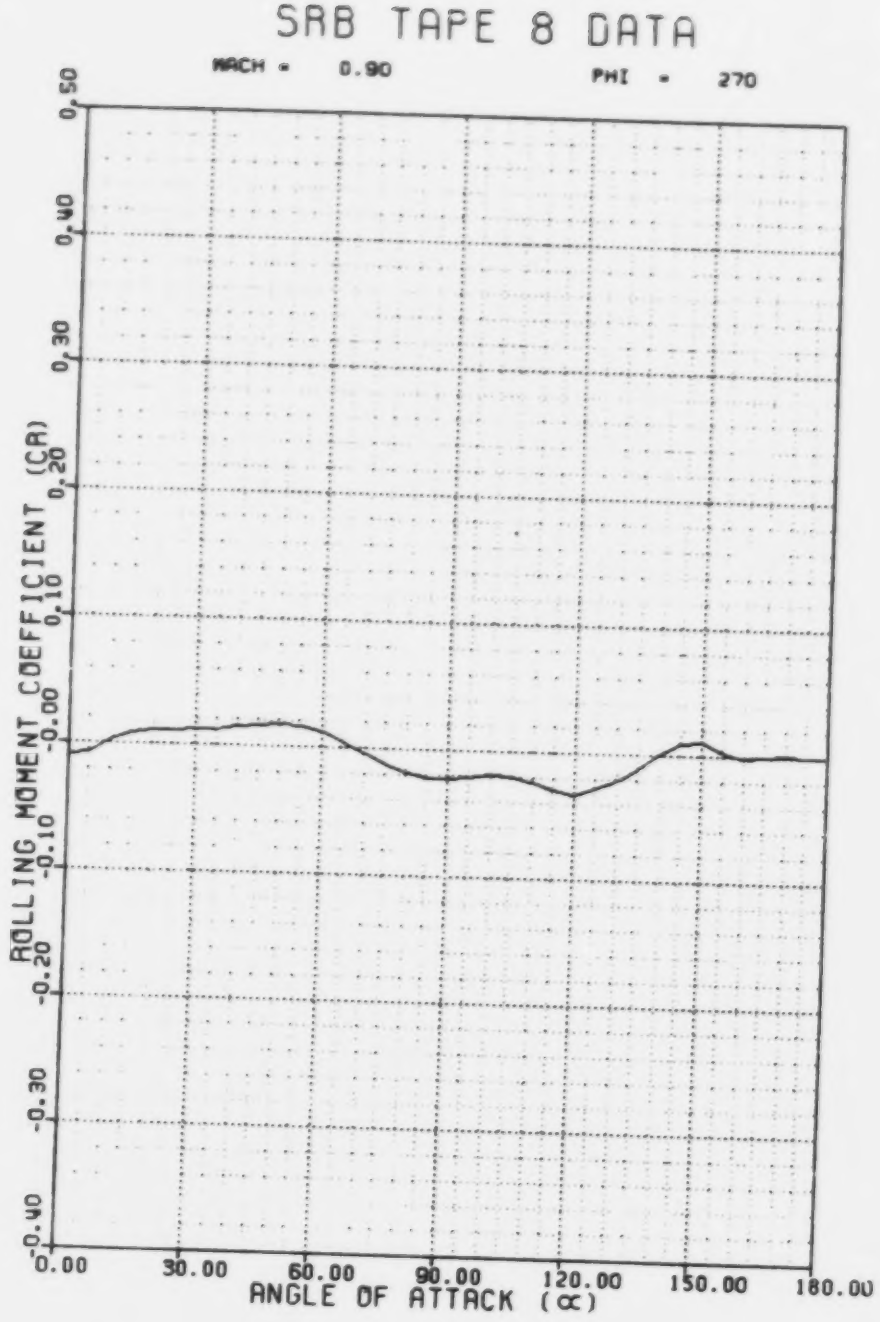
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 270
ROLLING MOMENT COEFFICIENT (CR)
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0.30
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0.10
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-0.10
-0.20
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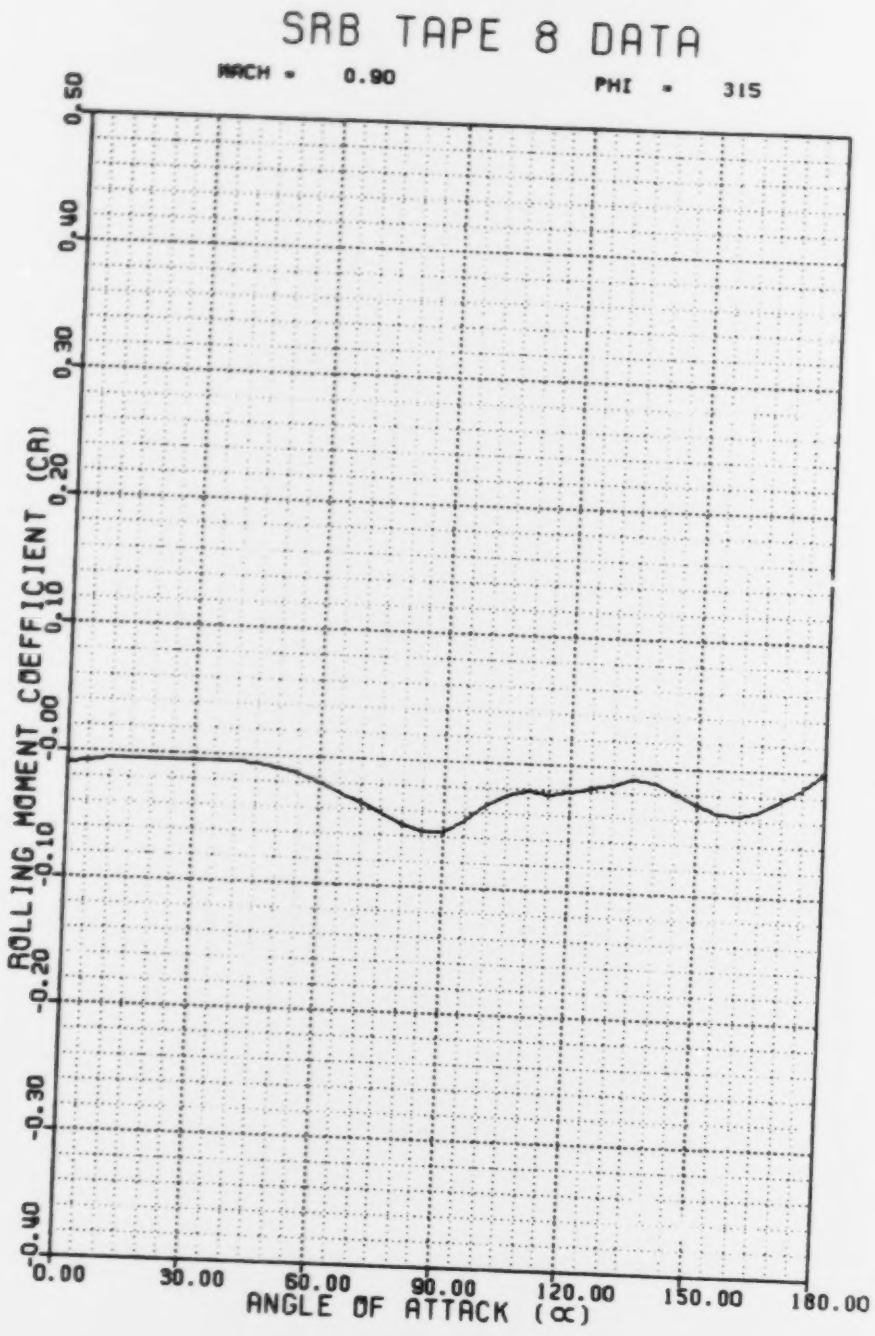
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.90
PHI = 315
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-0.10
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0.00
30.00
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90.00
120.00
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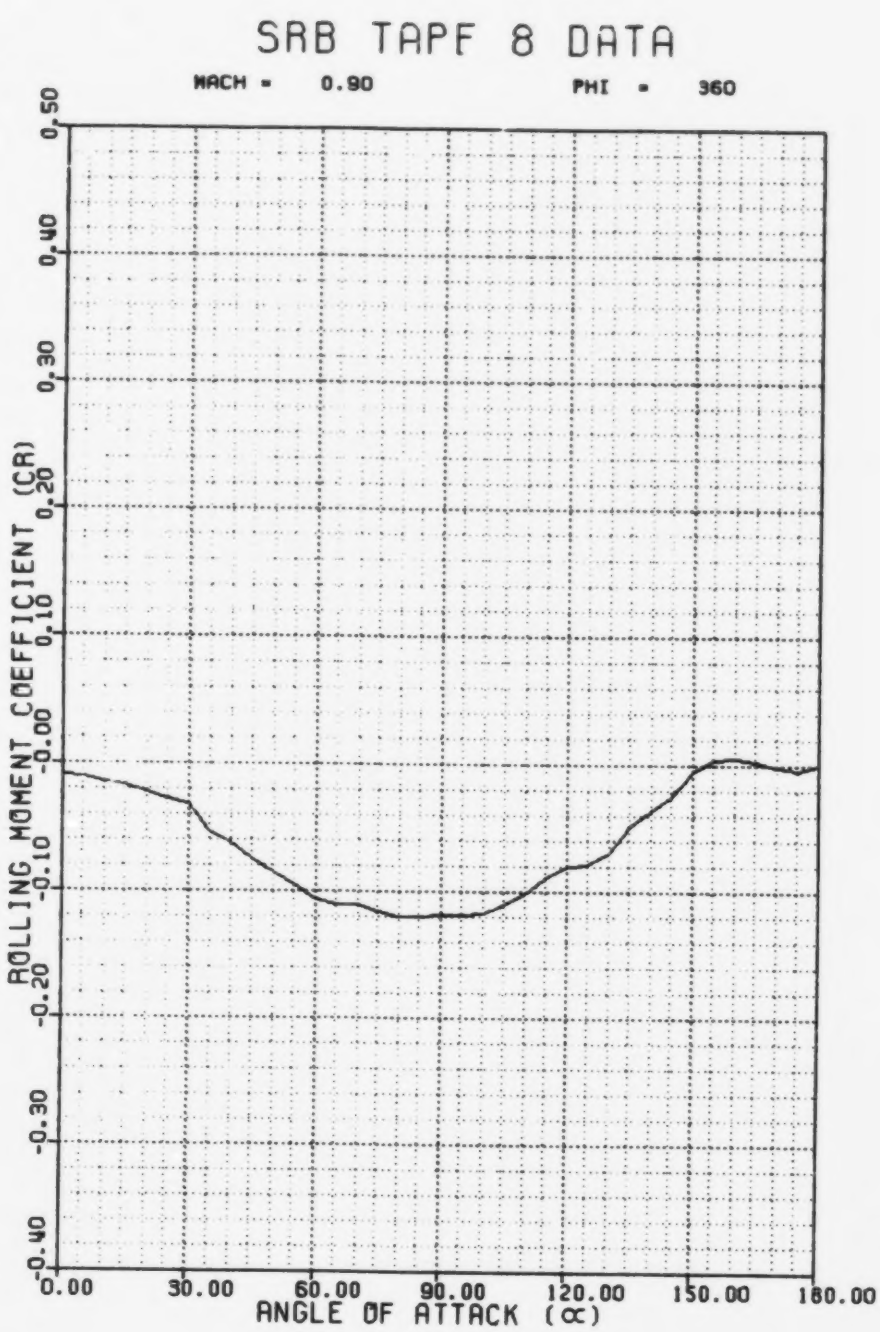
180.00
ANGLE OF ATTACK (α)


SRB TAPF 8 DATA
MACH = 0.90
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
0.10
-0.00
-0.10
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0.00
30.00
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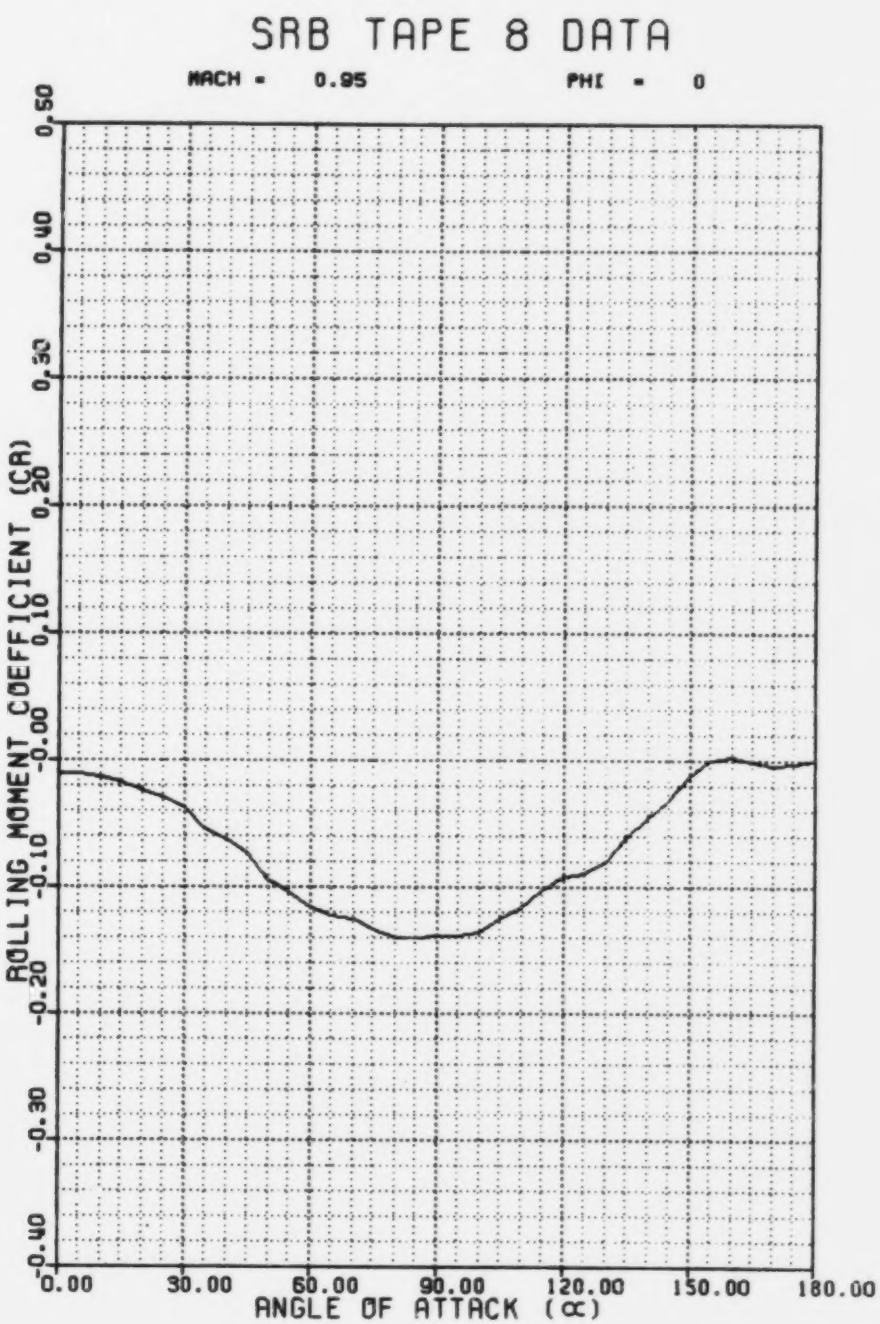
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 0
ROLLING MOMENT COEFFICIENT (CA)
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0.30
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0.00
-0.10
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-0.30
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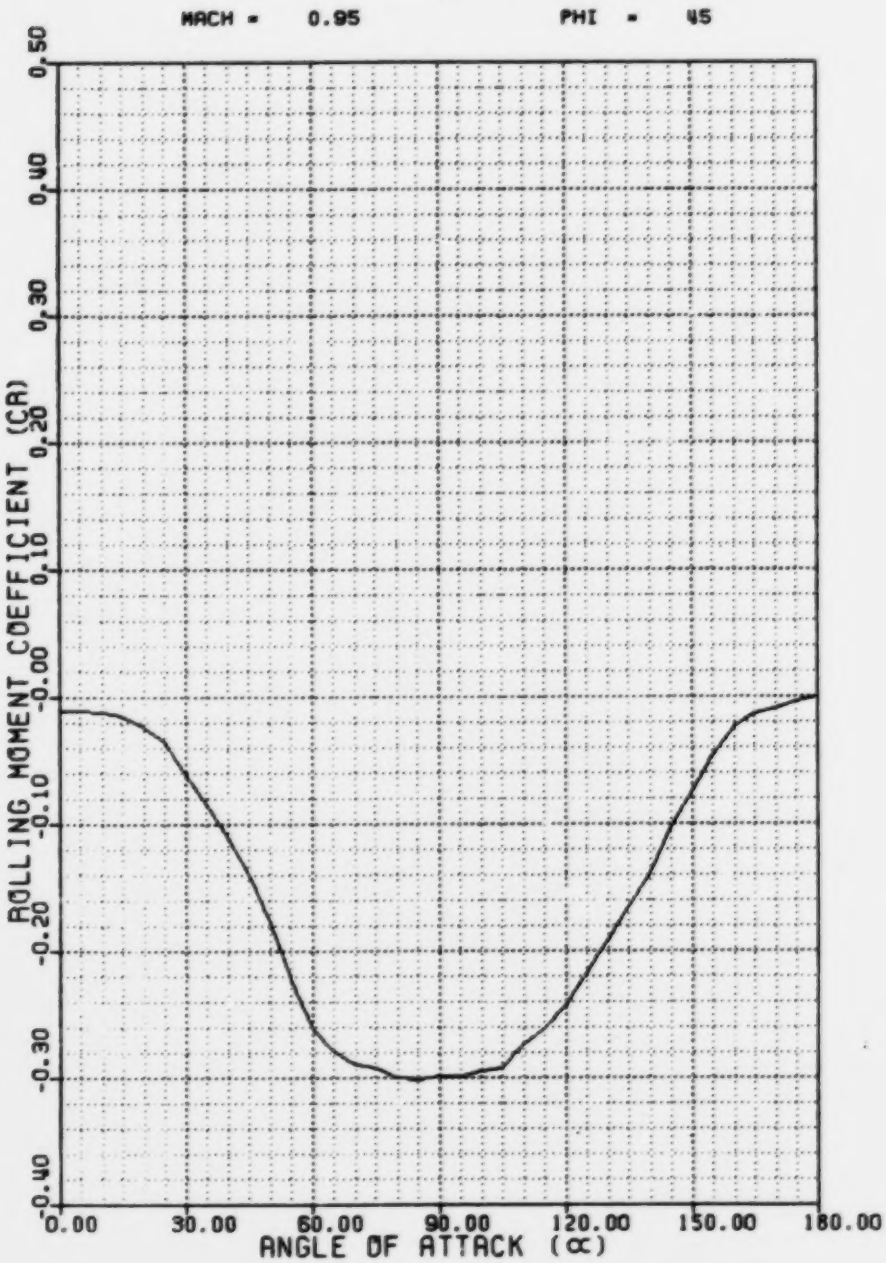
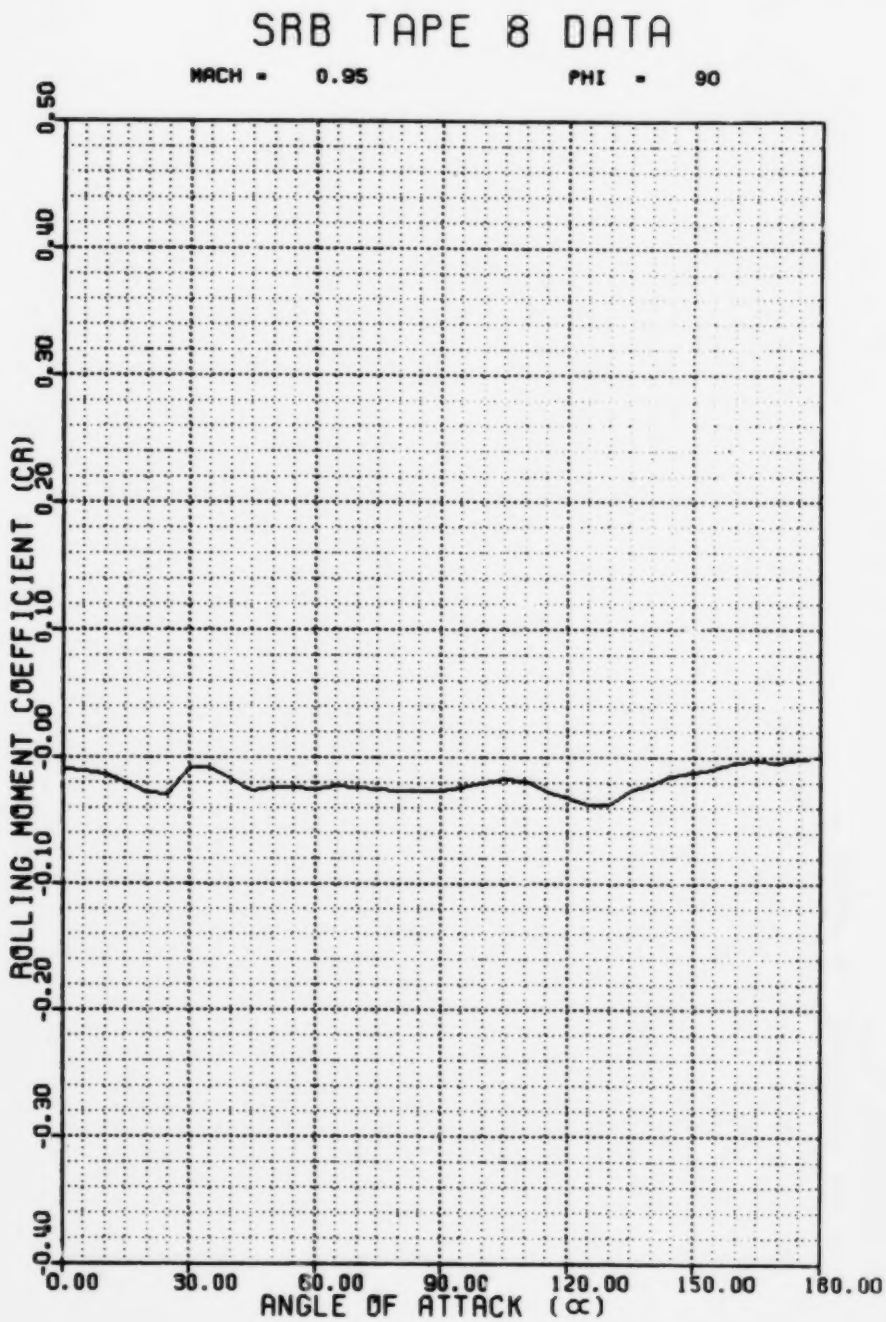
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA




SRB TAPE 8 DATA
MACH = 0.95
PHI = 90
ROLLING MOMENT COEFFICIENT (CA)
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-0.10
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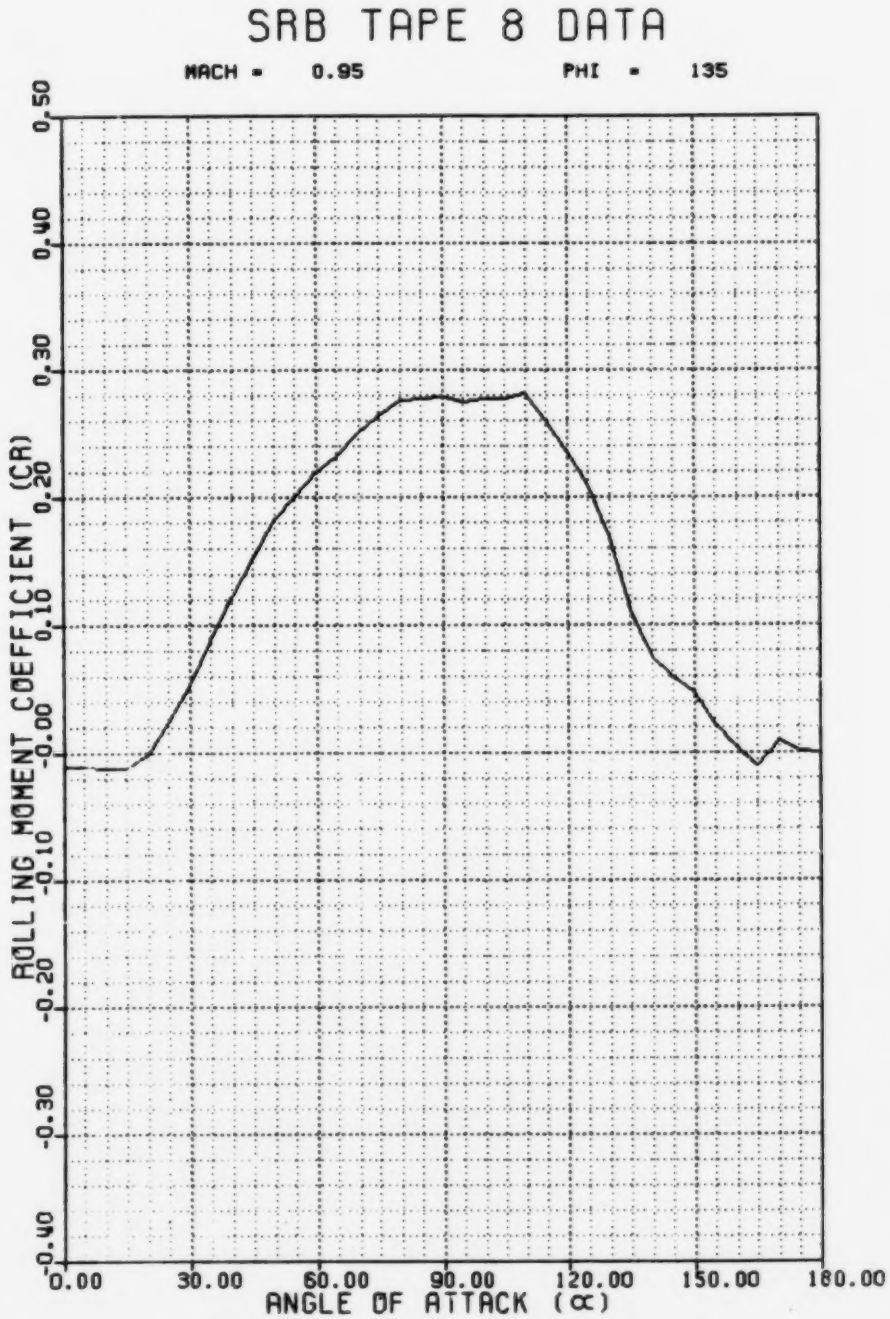
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 135
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-0.10
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0.00
30.00
60.00
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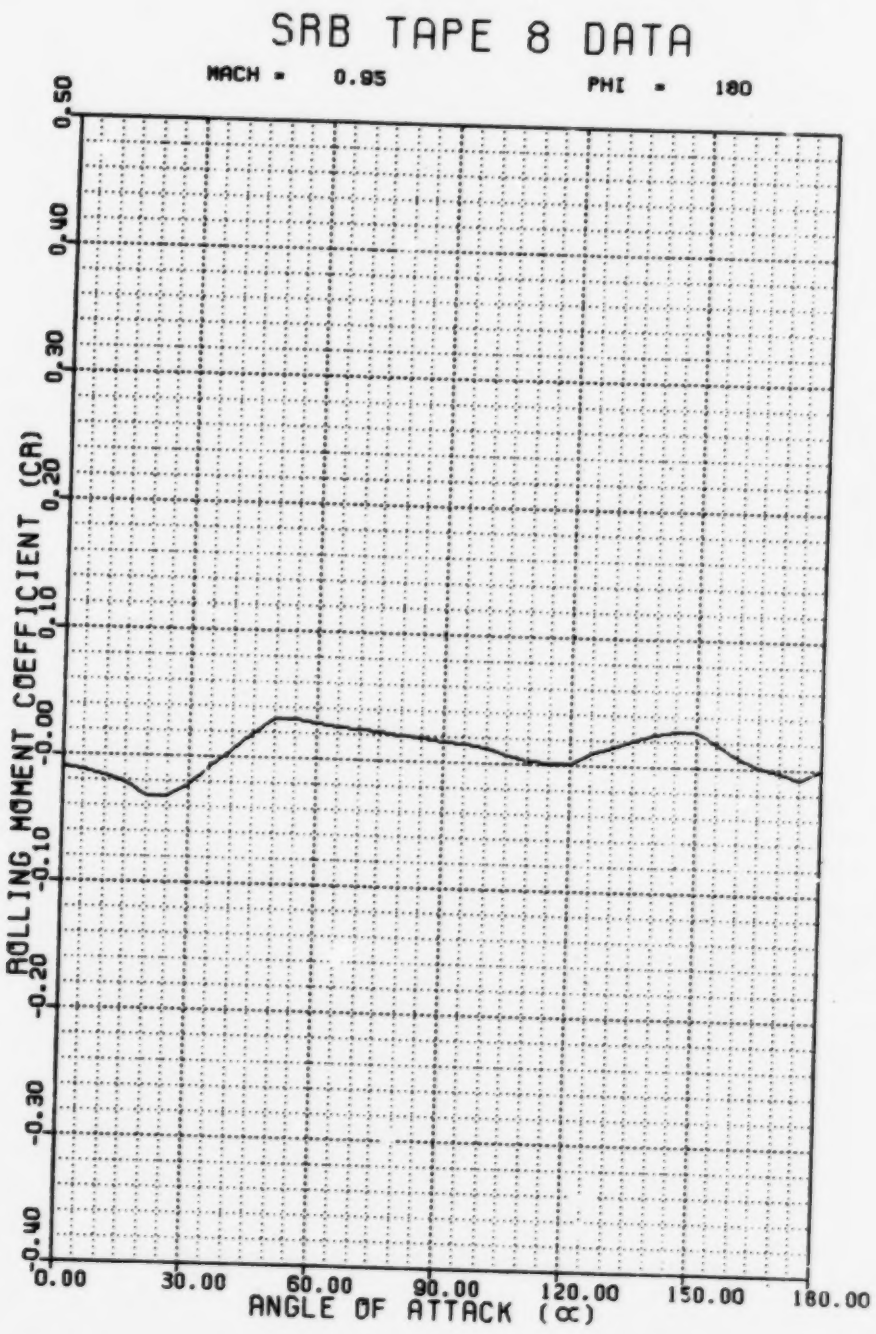
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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-0.10
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0.00
30.00
60.00
90.00
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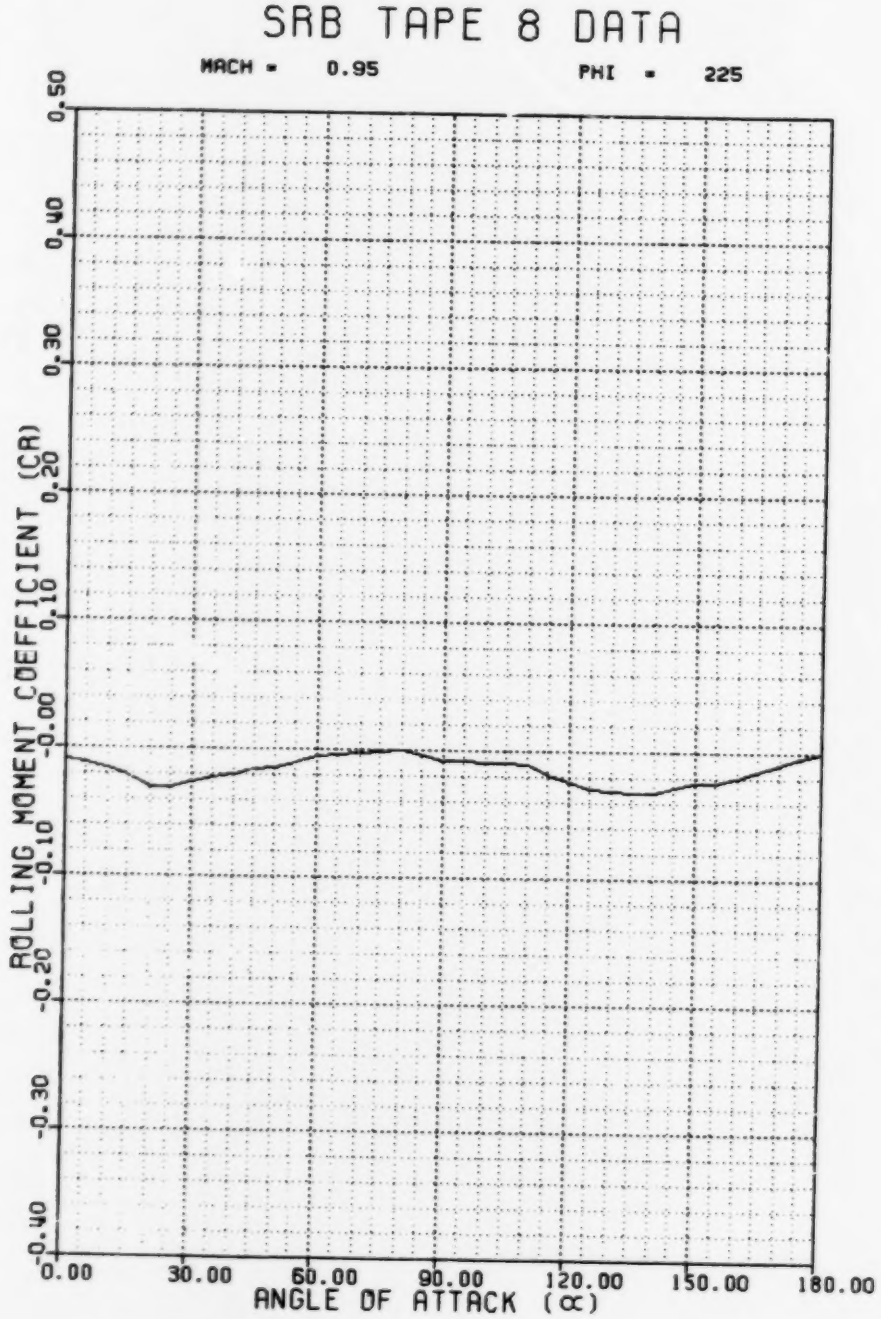
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 225
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0.00
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120.00
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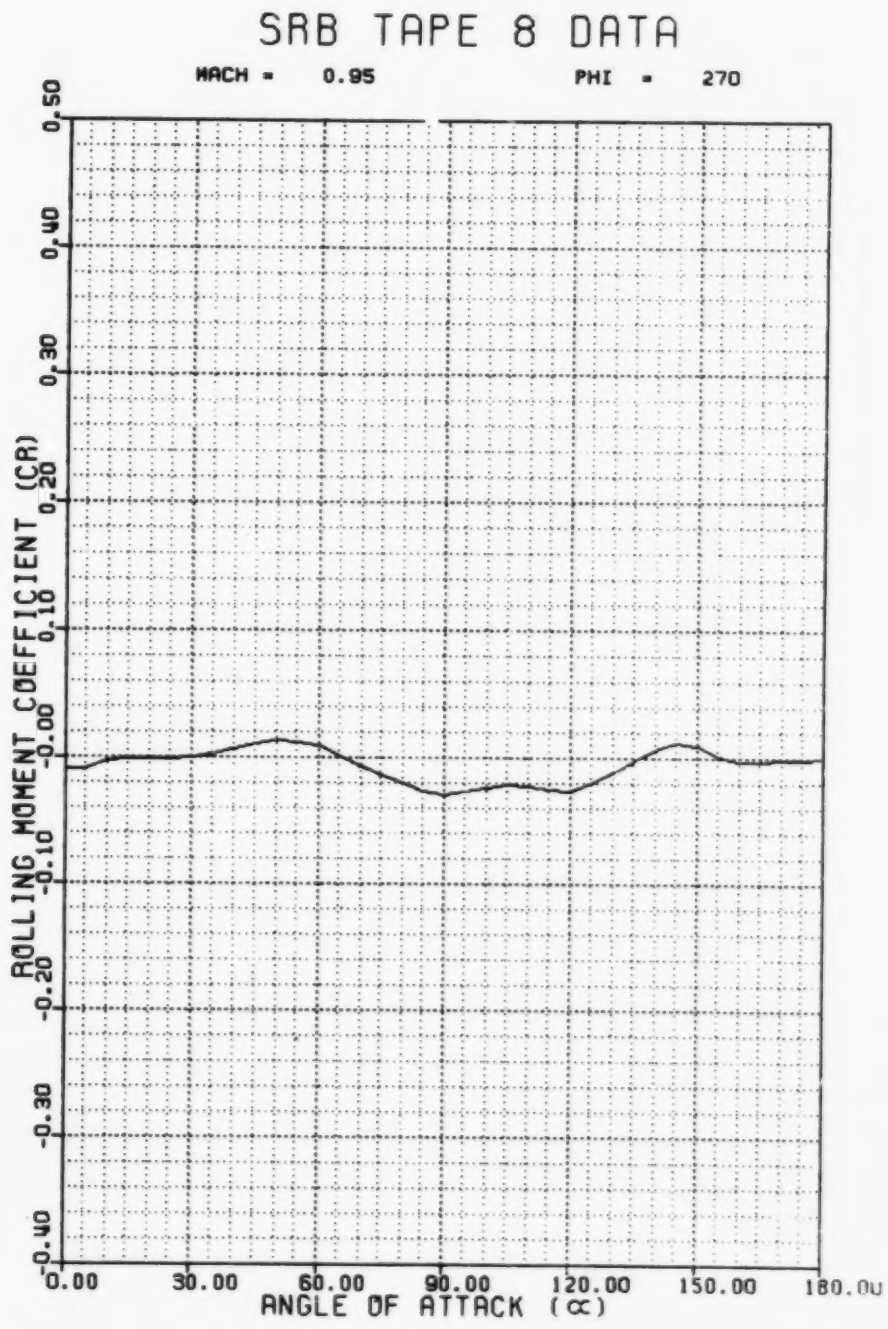
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 270
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0.00
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120.00
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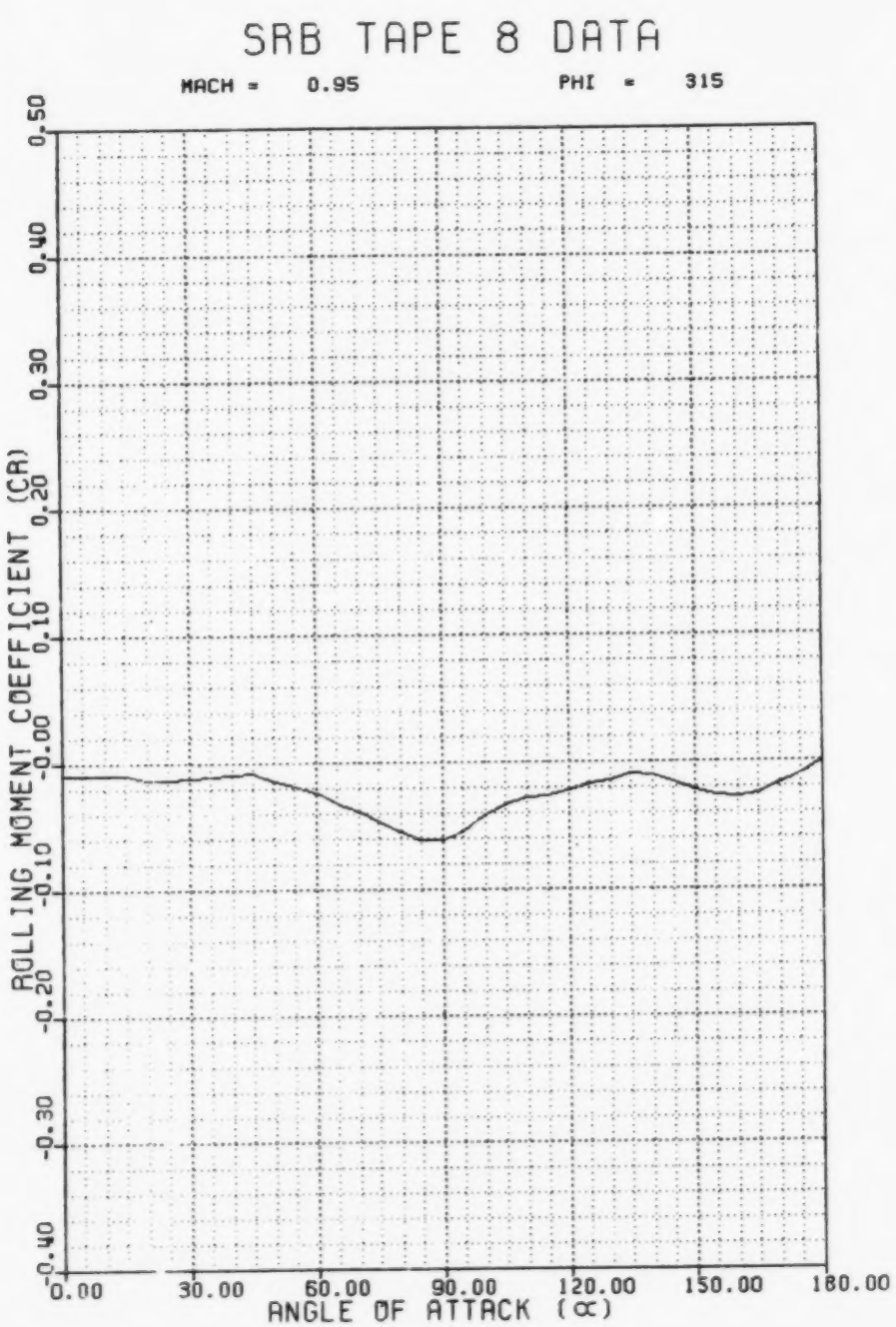
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 315
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0.30
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-0.10
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0.00
30.00
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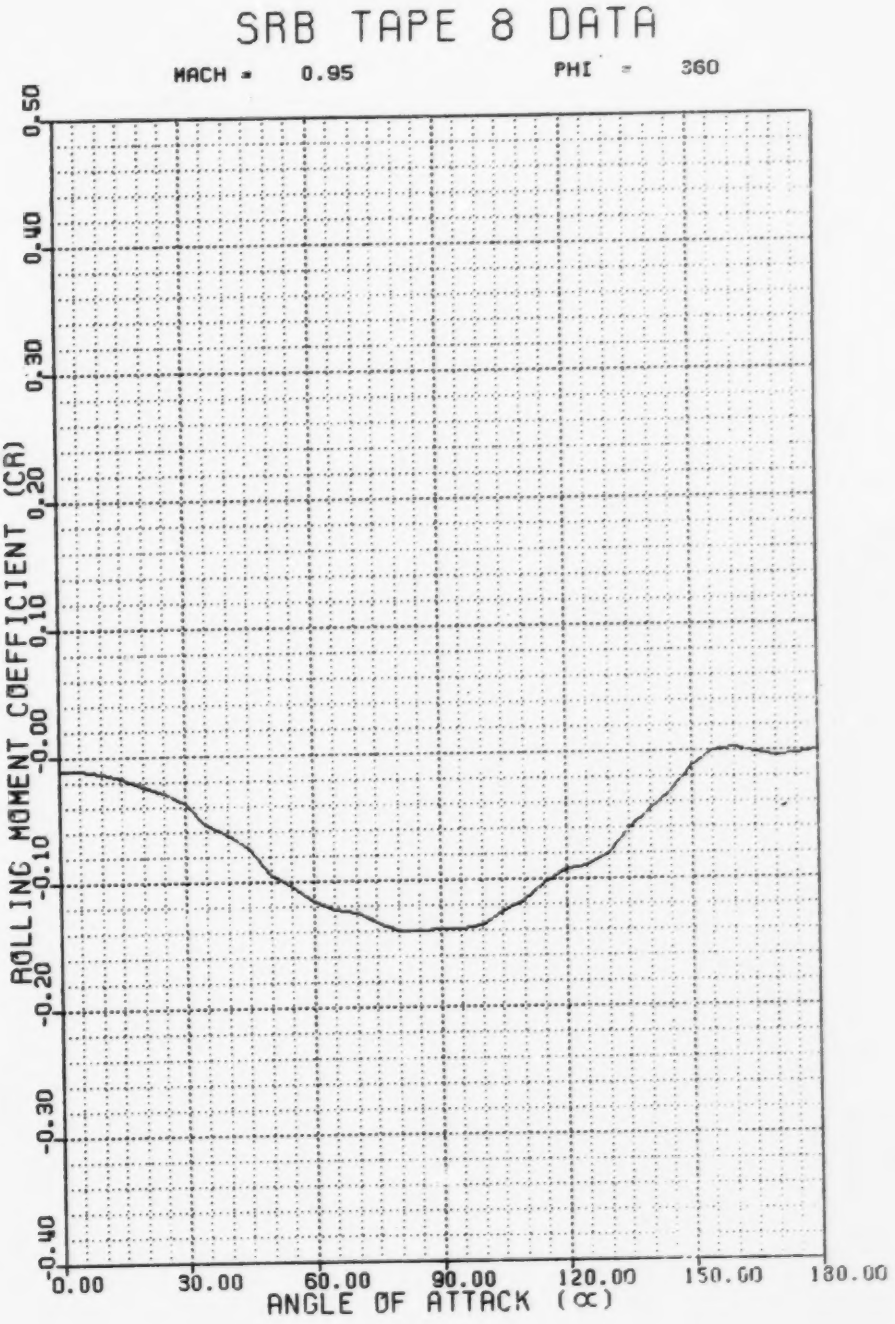
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 0.95
PHI = 360
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-0.10
-0.20
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30.00
60.00
90.00
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150.00
180.00
ANGLE OF ATTACK (α)

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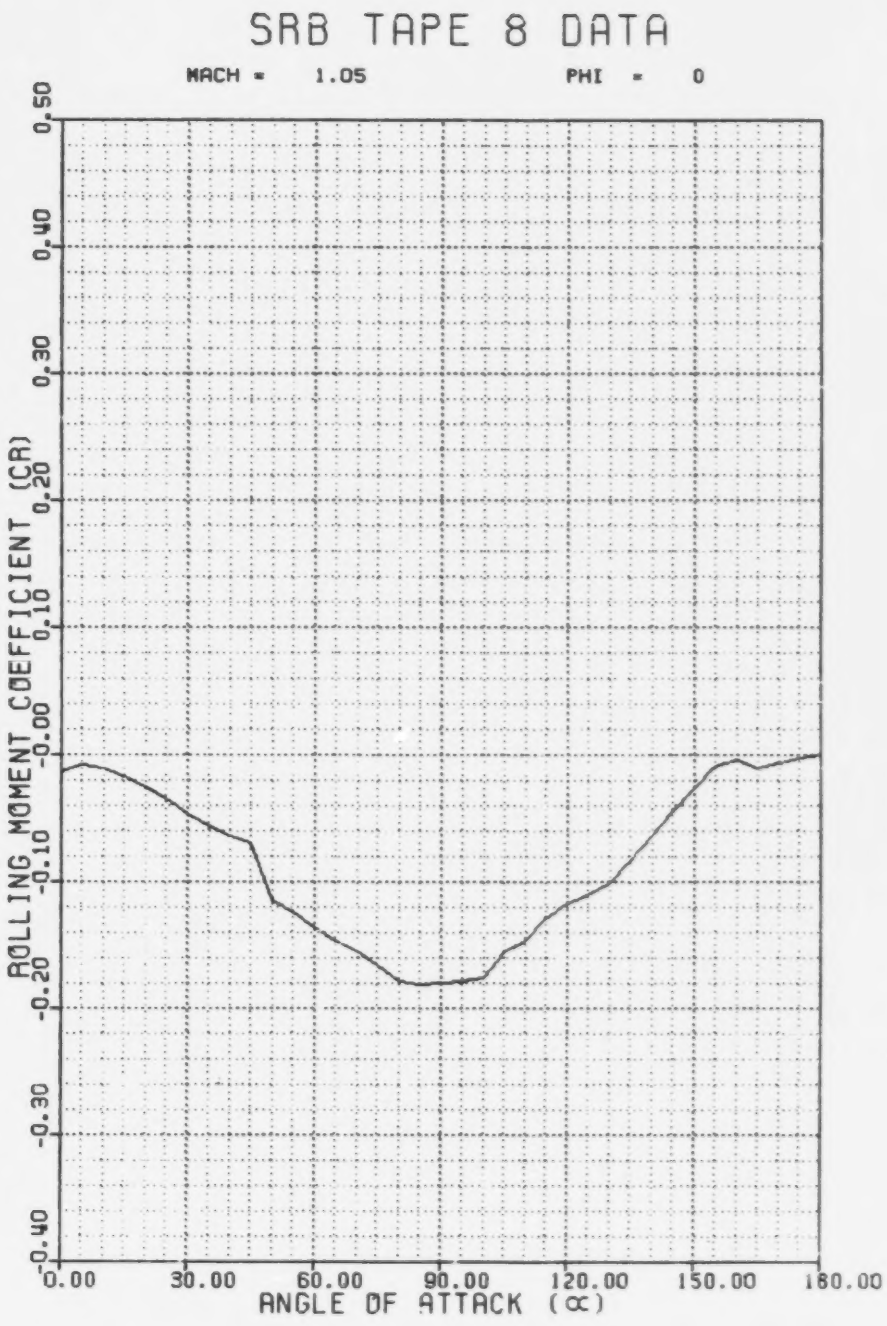
SRB TAPE 8 DATA
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PHI = 0
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120.00
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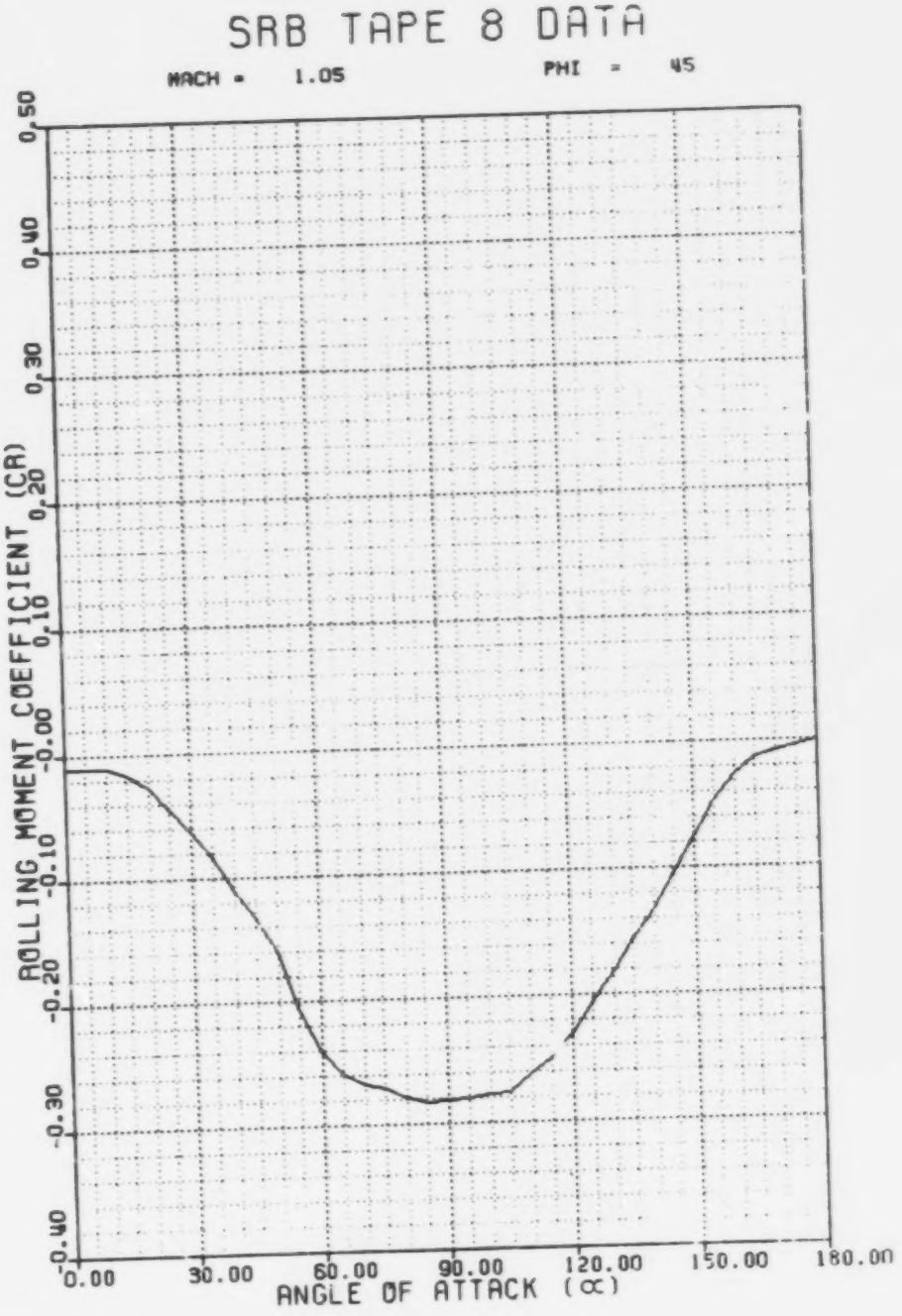
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 45
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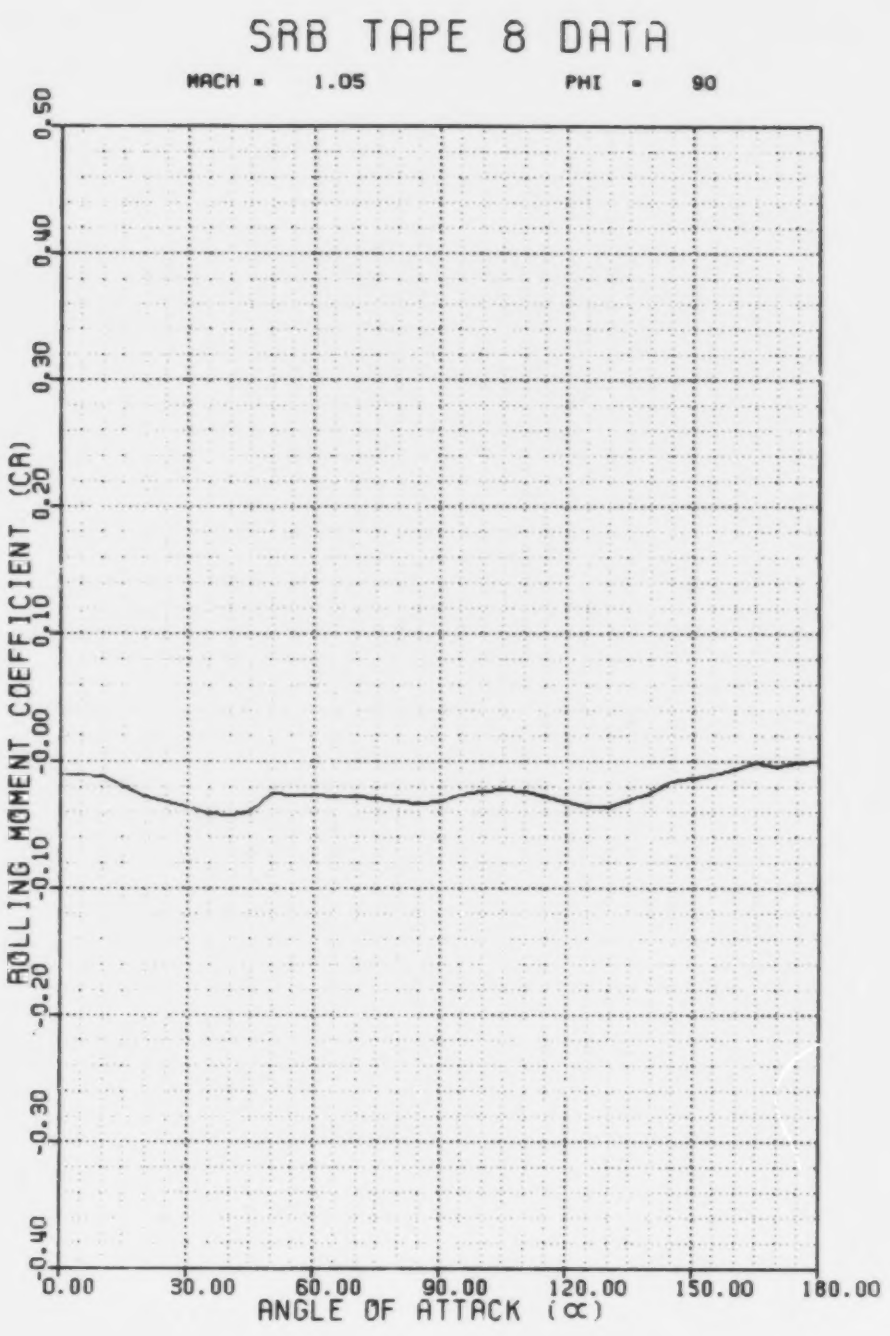
180.00
ANGLE OF ATTACK (α)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120.00
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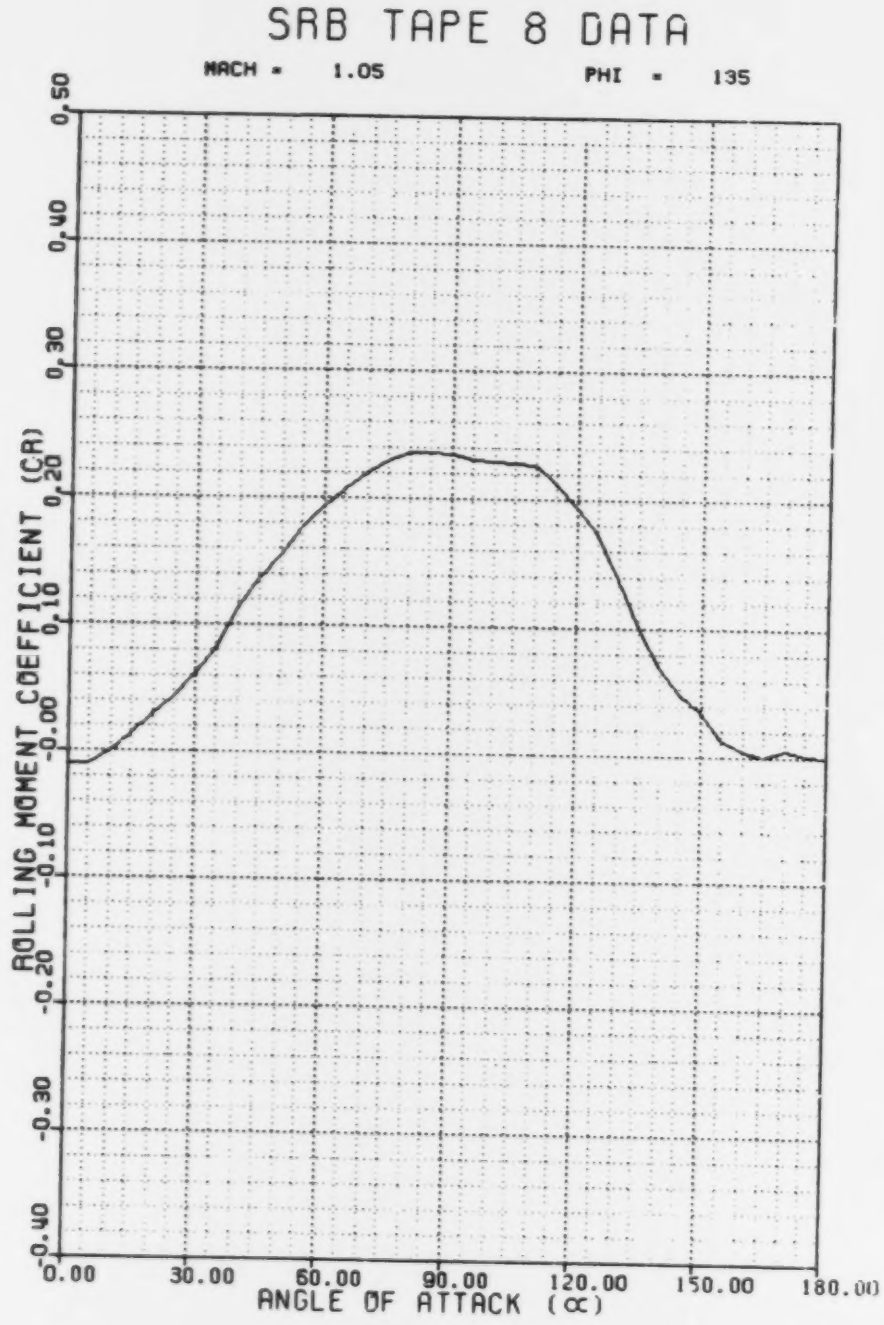
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
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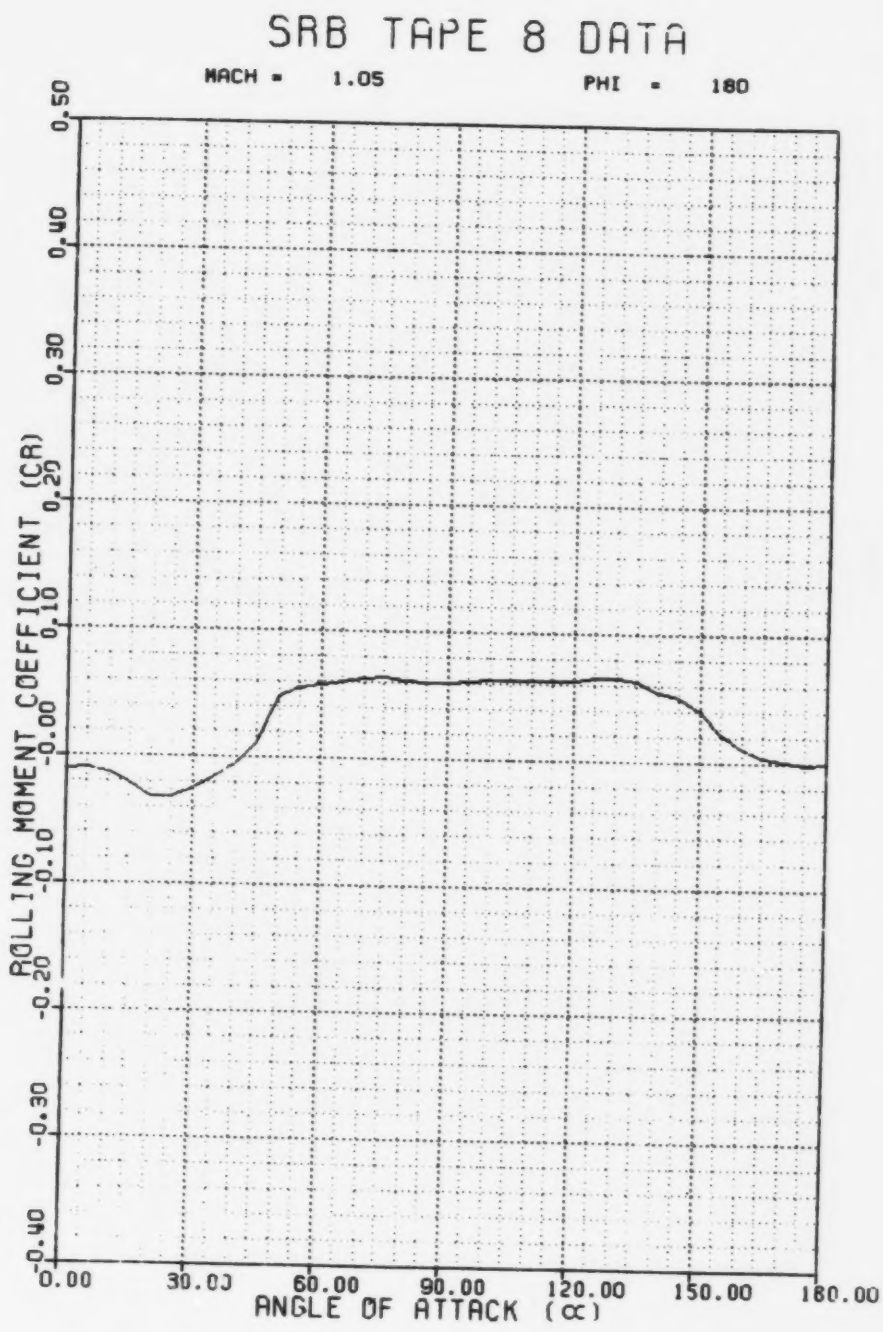
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 180
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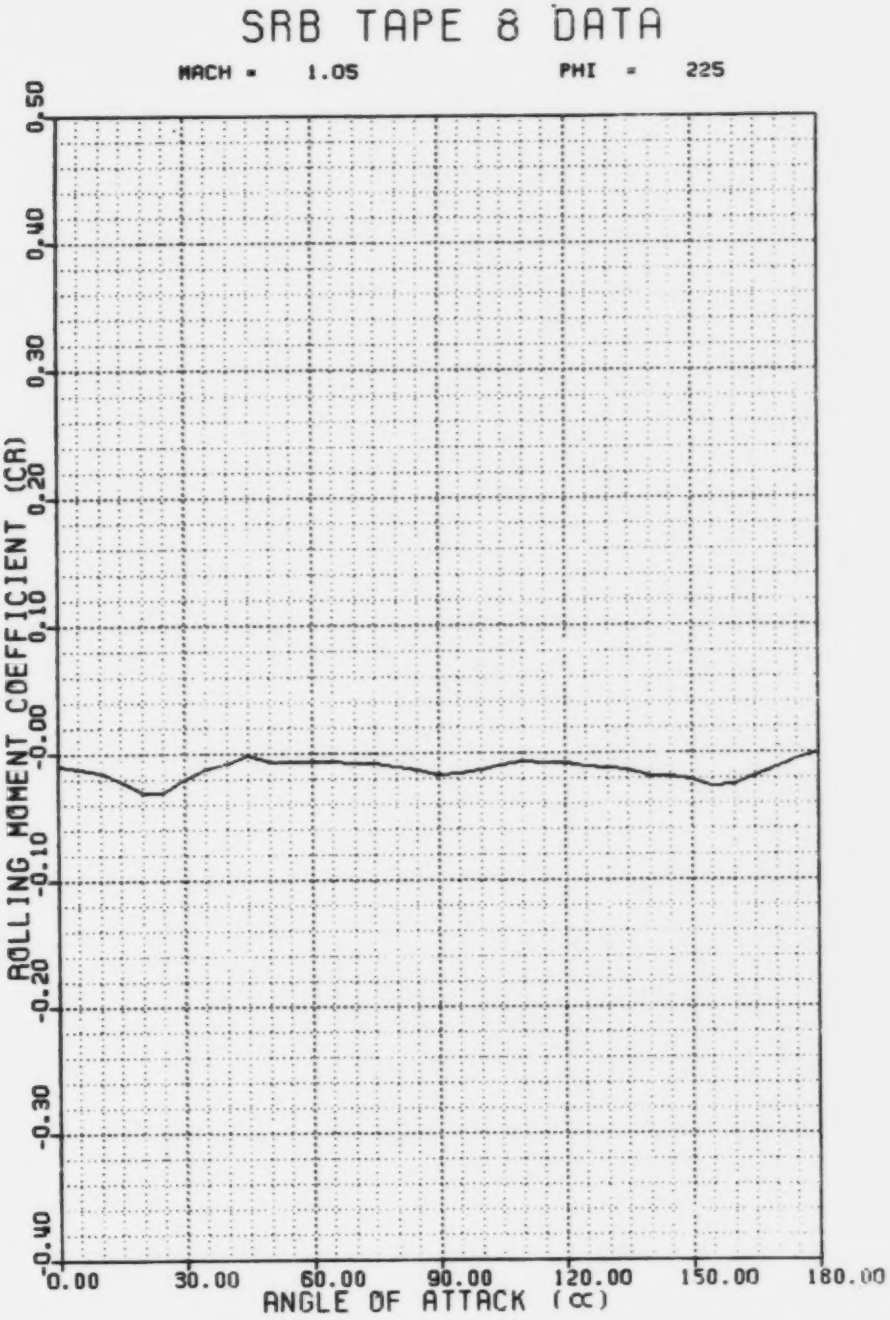
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 225
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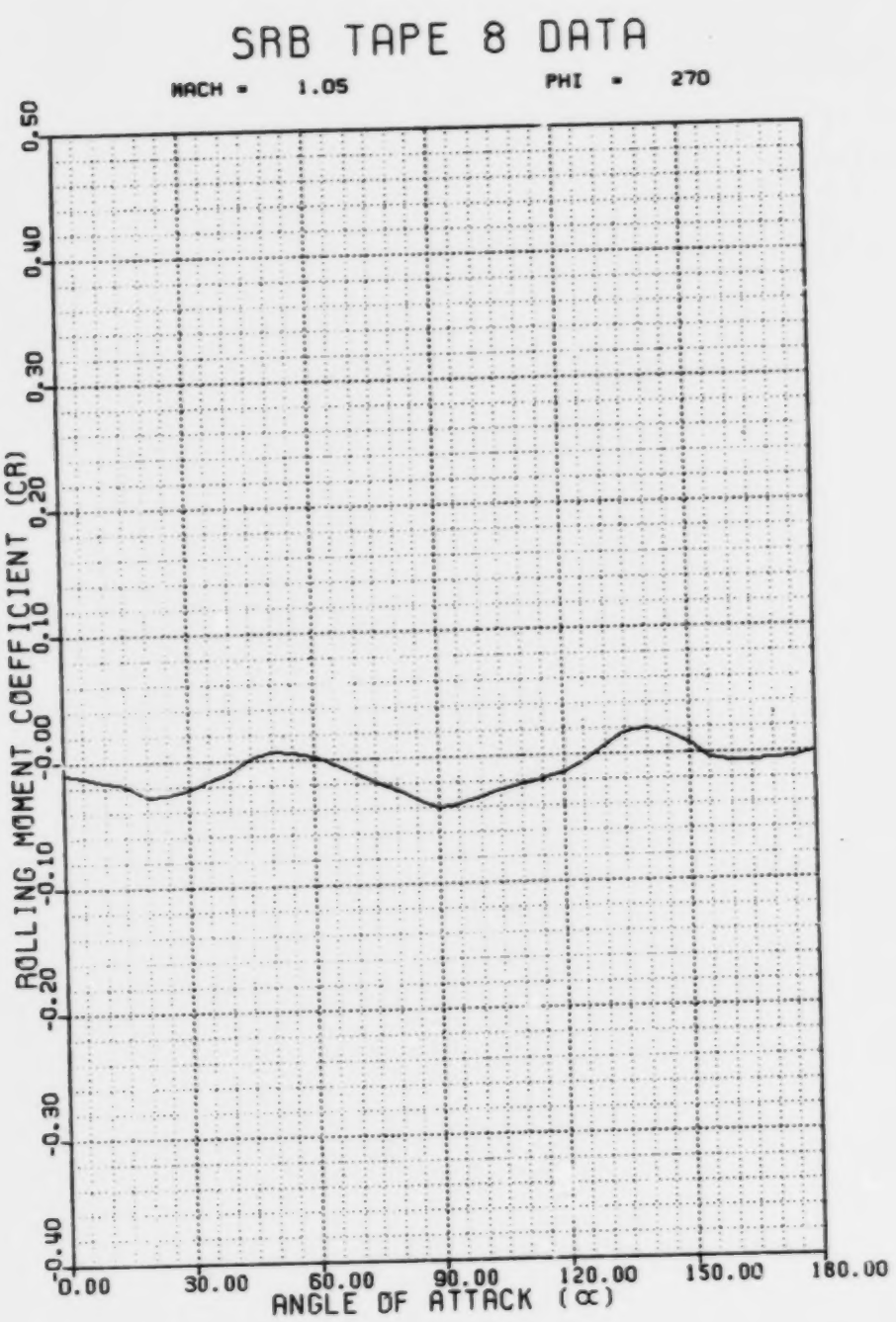
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.05
PHI = 270
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-0.40
0.00
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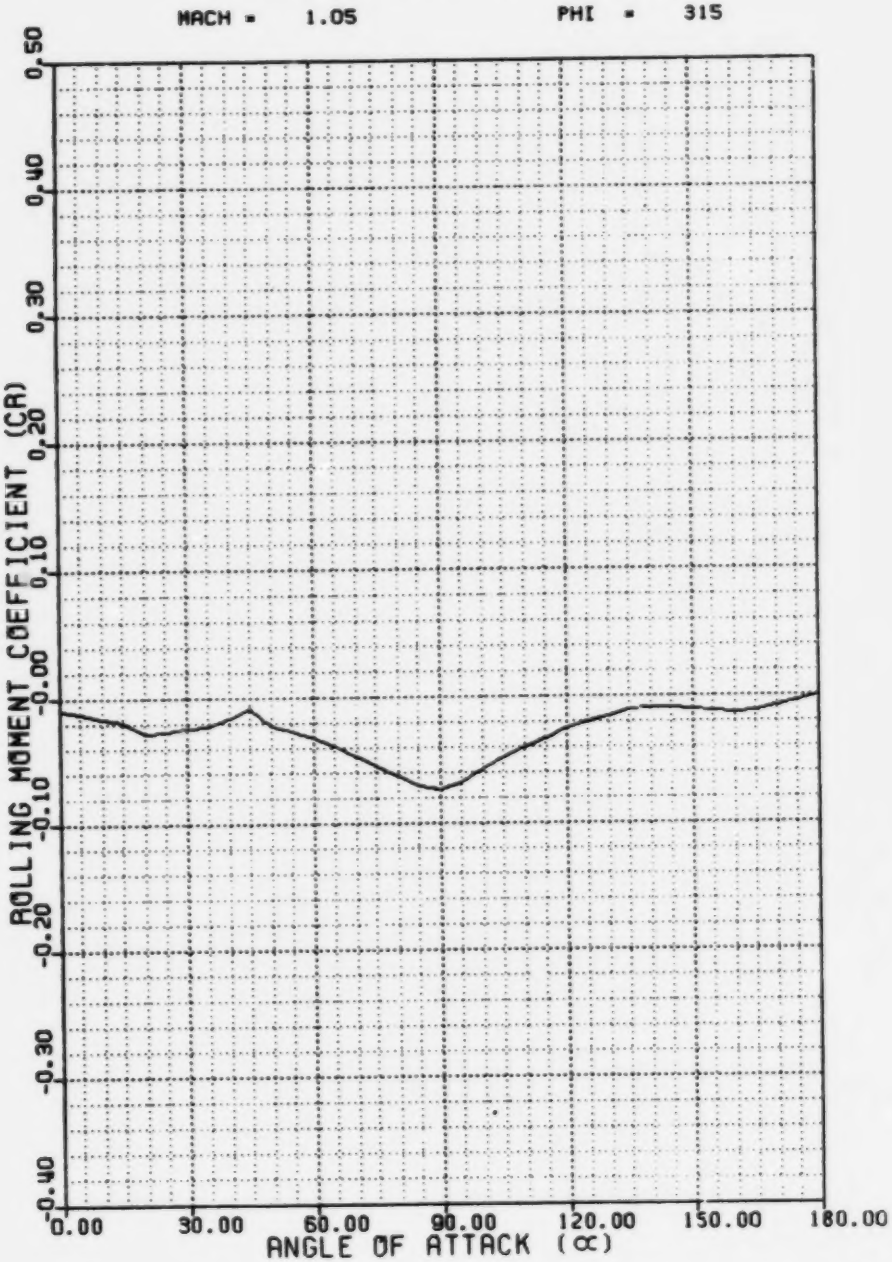
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.05 PHI = 315



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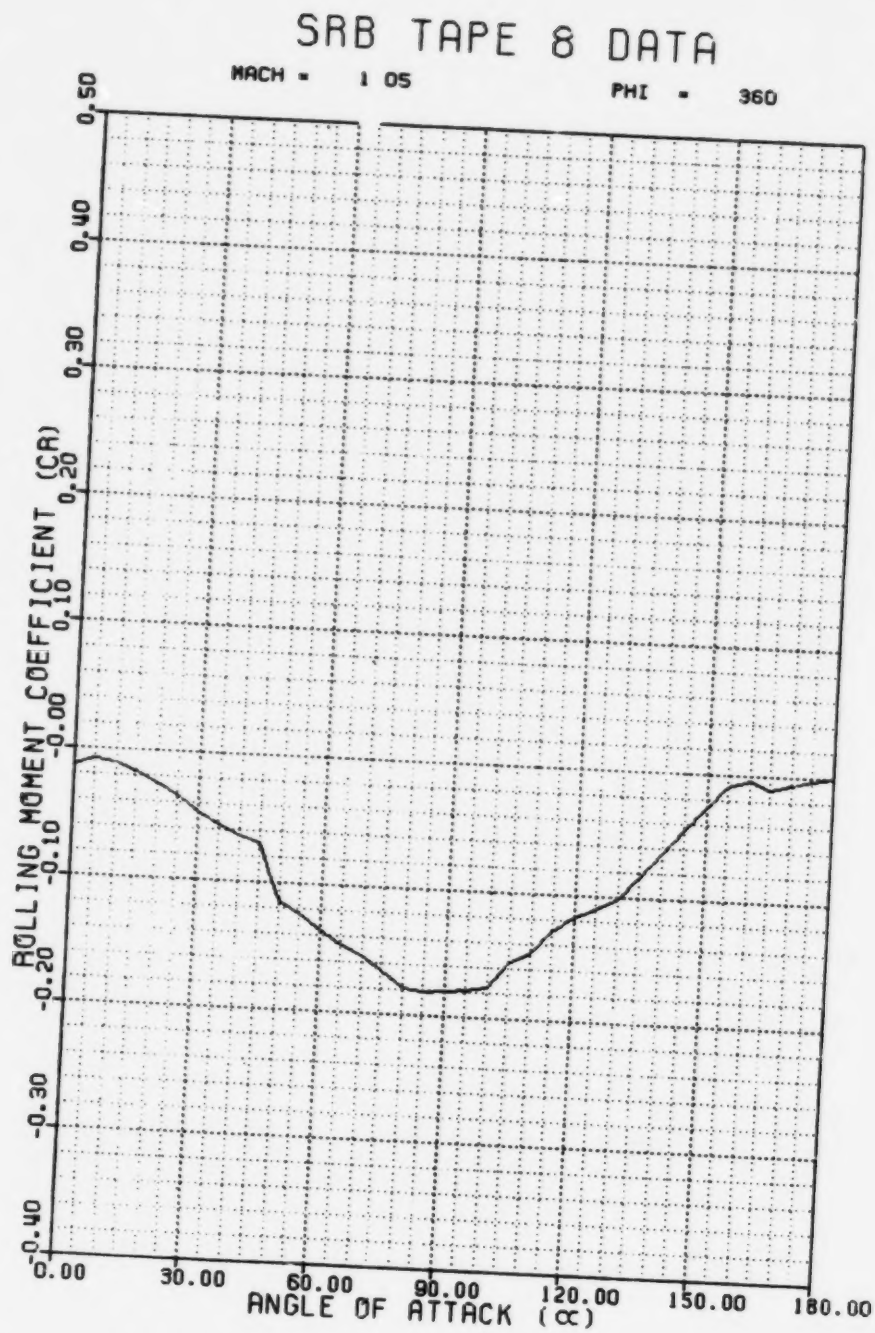
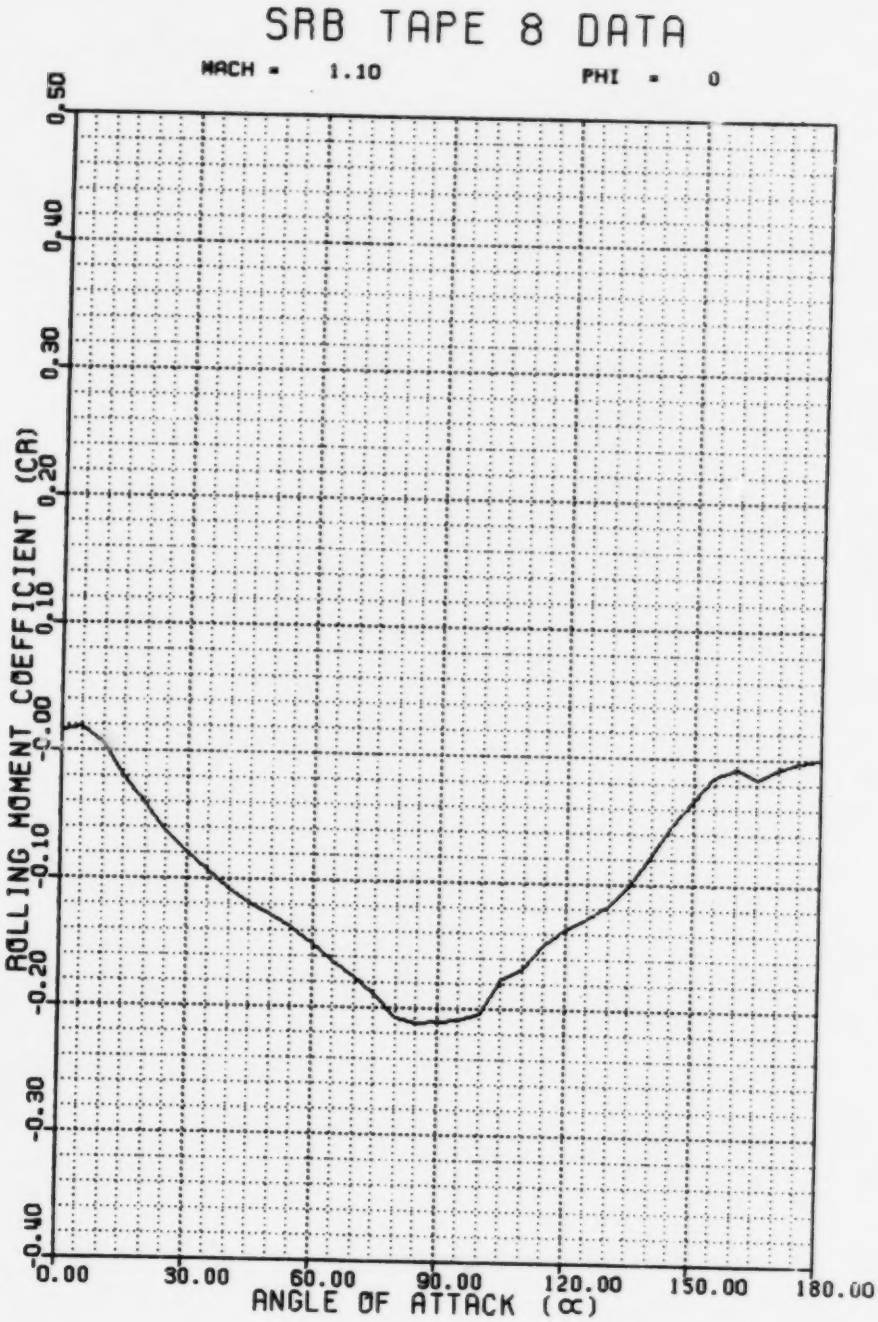
LOCKHEED-HUNTSVILLE ENGINEERING CENTER


SRB TAPE 8 DATA
MACH = 1.05
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 0
ROLLING MOMENT COEFFICIENT (CR)
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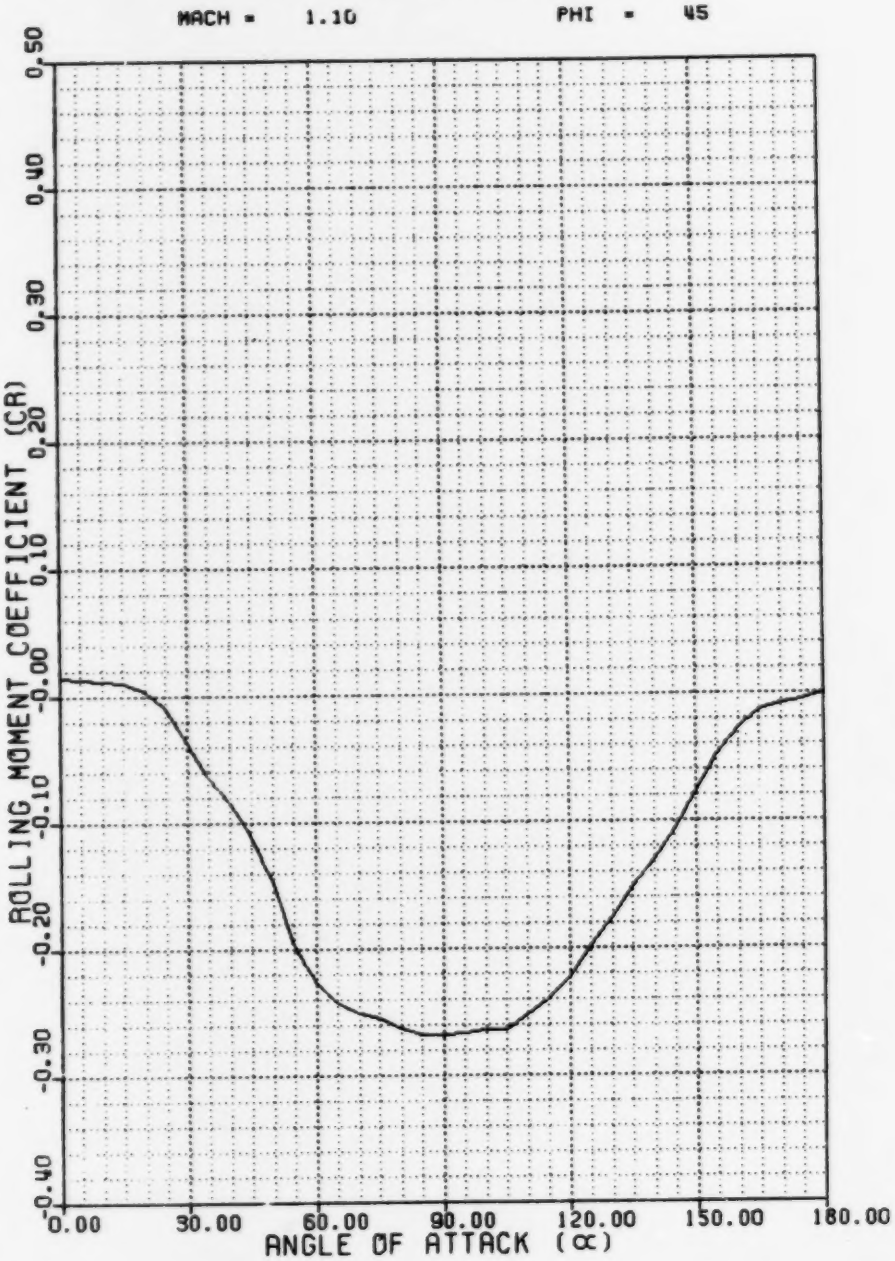
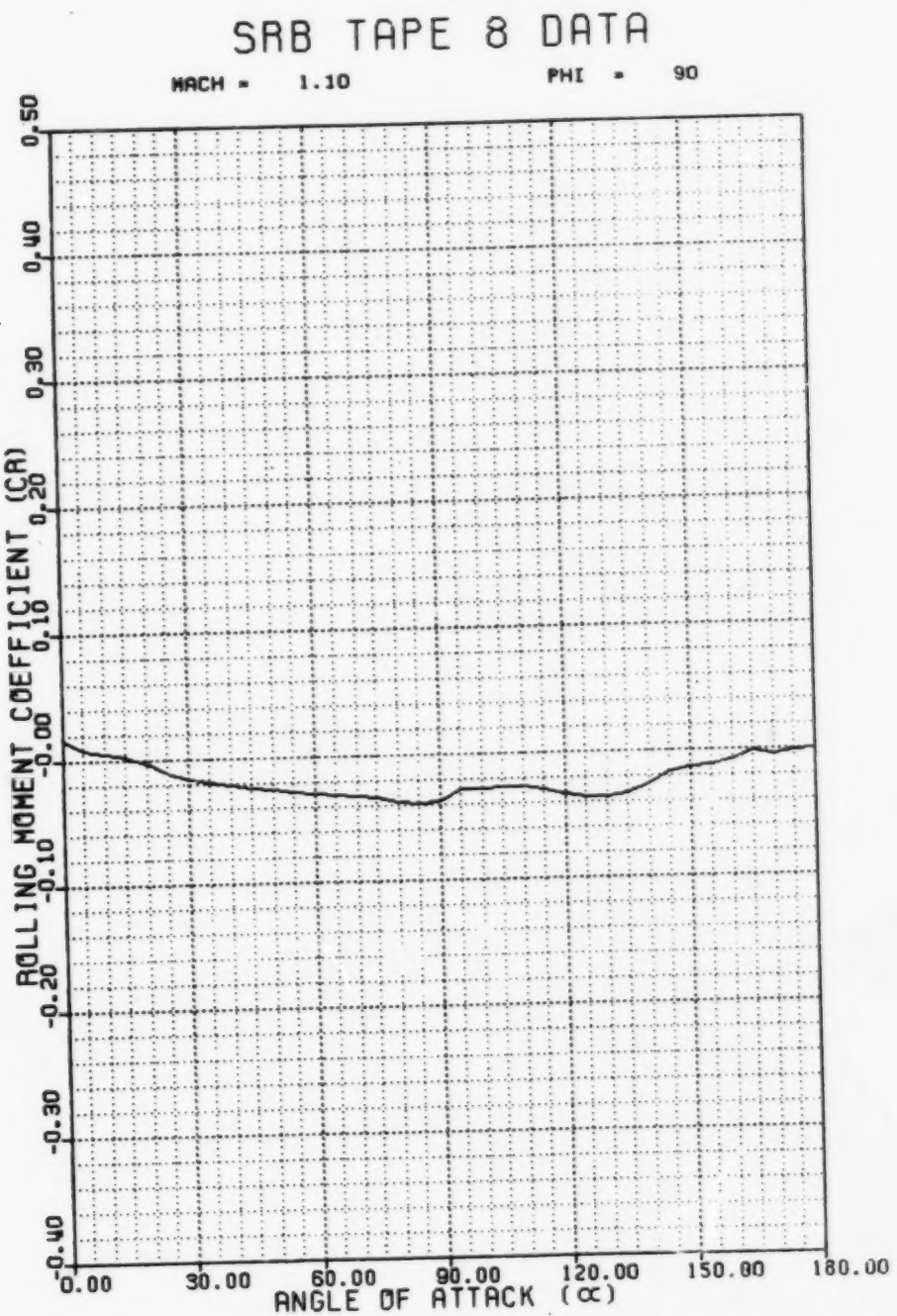
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE & DATA

MACH = 1.10 PHI = 45




SRB TAPE 8 DATA
MACH = 1.10
PHI = 90
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-0.10
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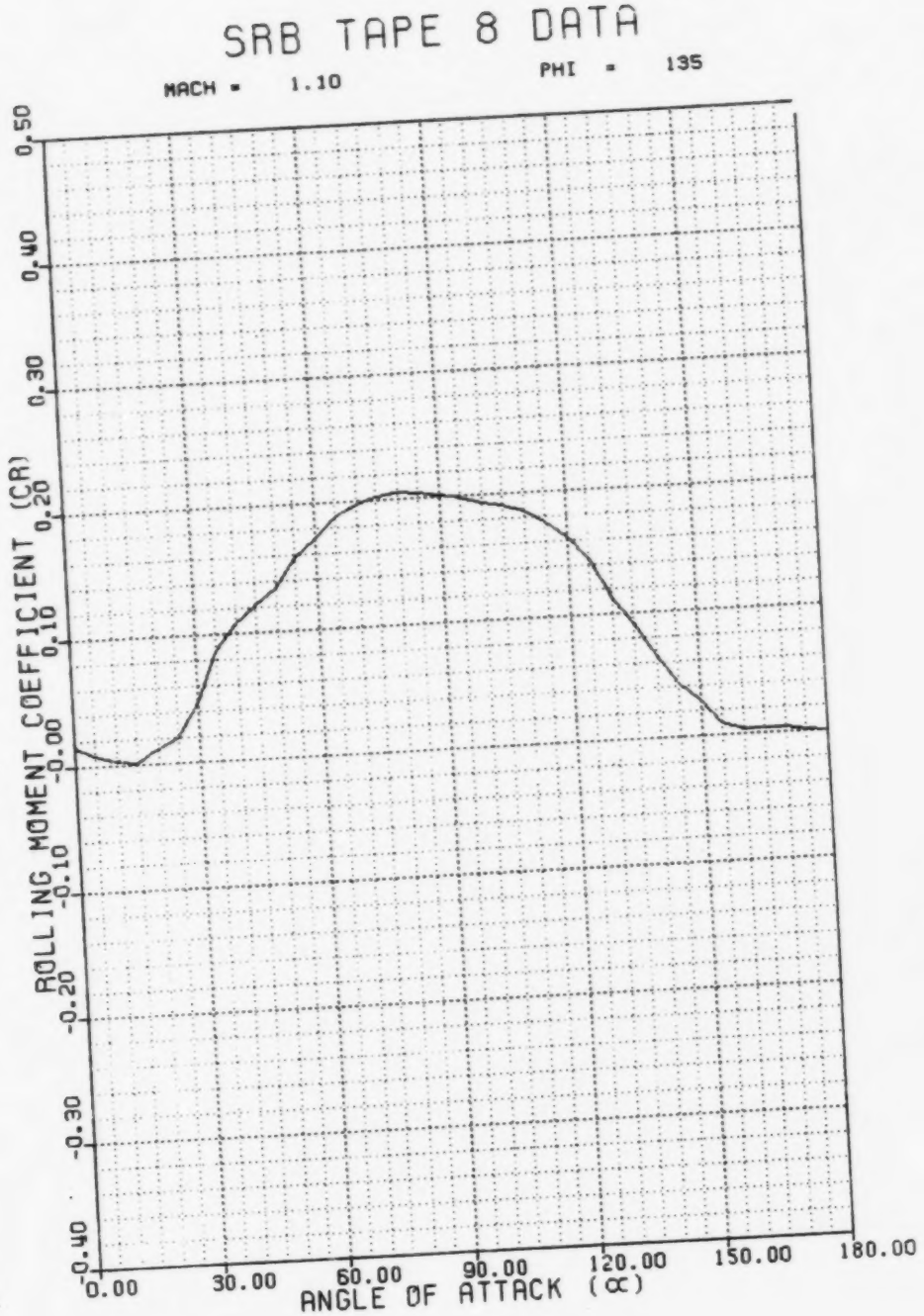
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 135
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-0.10
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0.00
30.00
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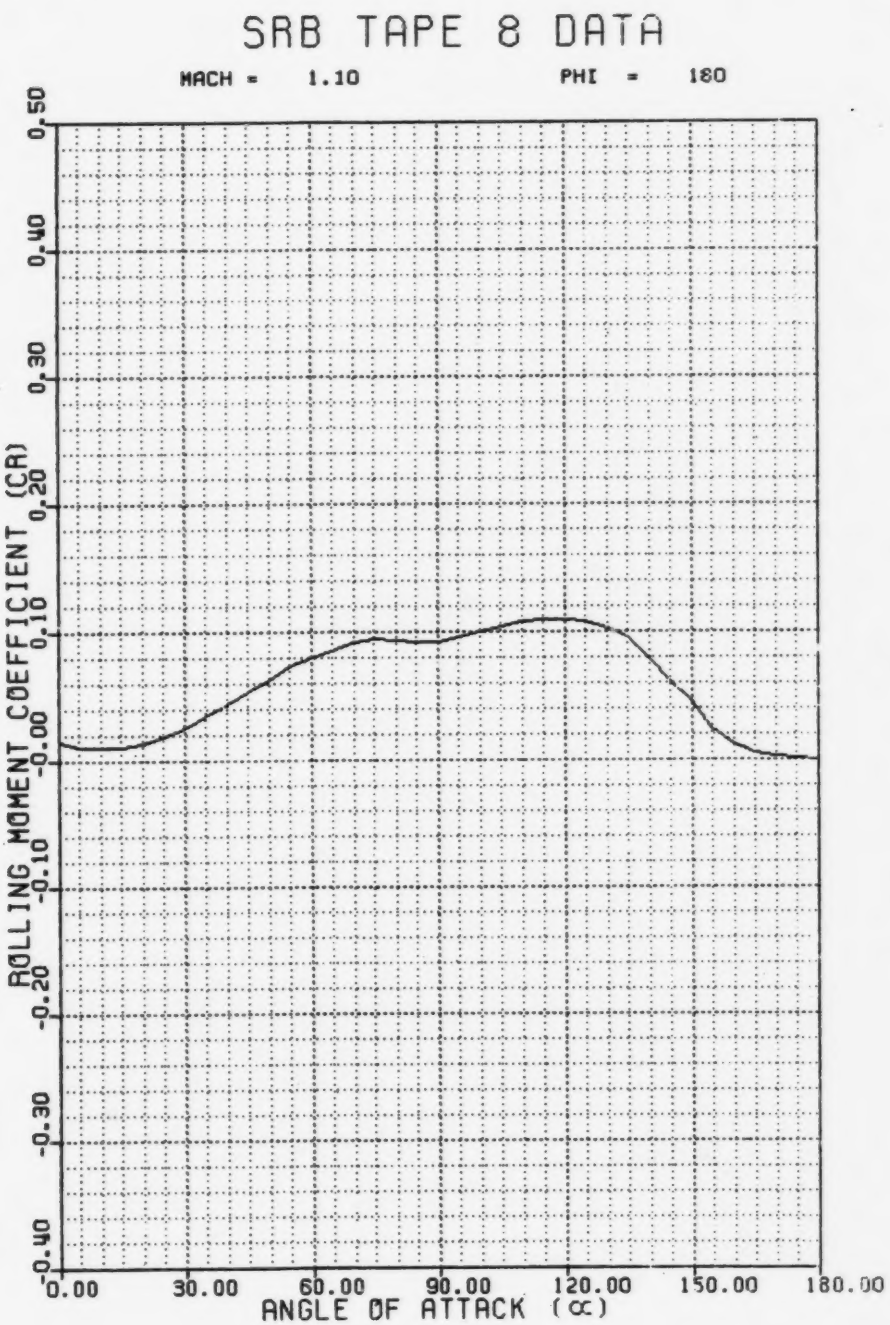
120.00
150.00
180.00
ANGLE OF ATTACK (α)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MACH = 1.10
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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0.00
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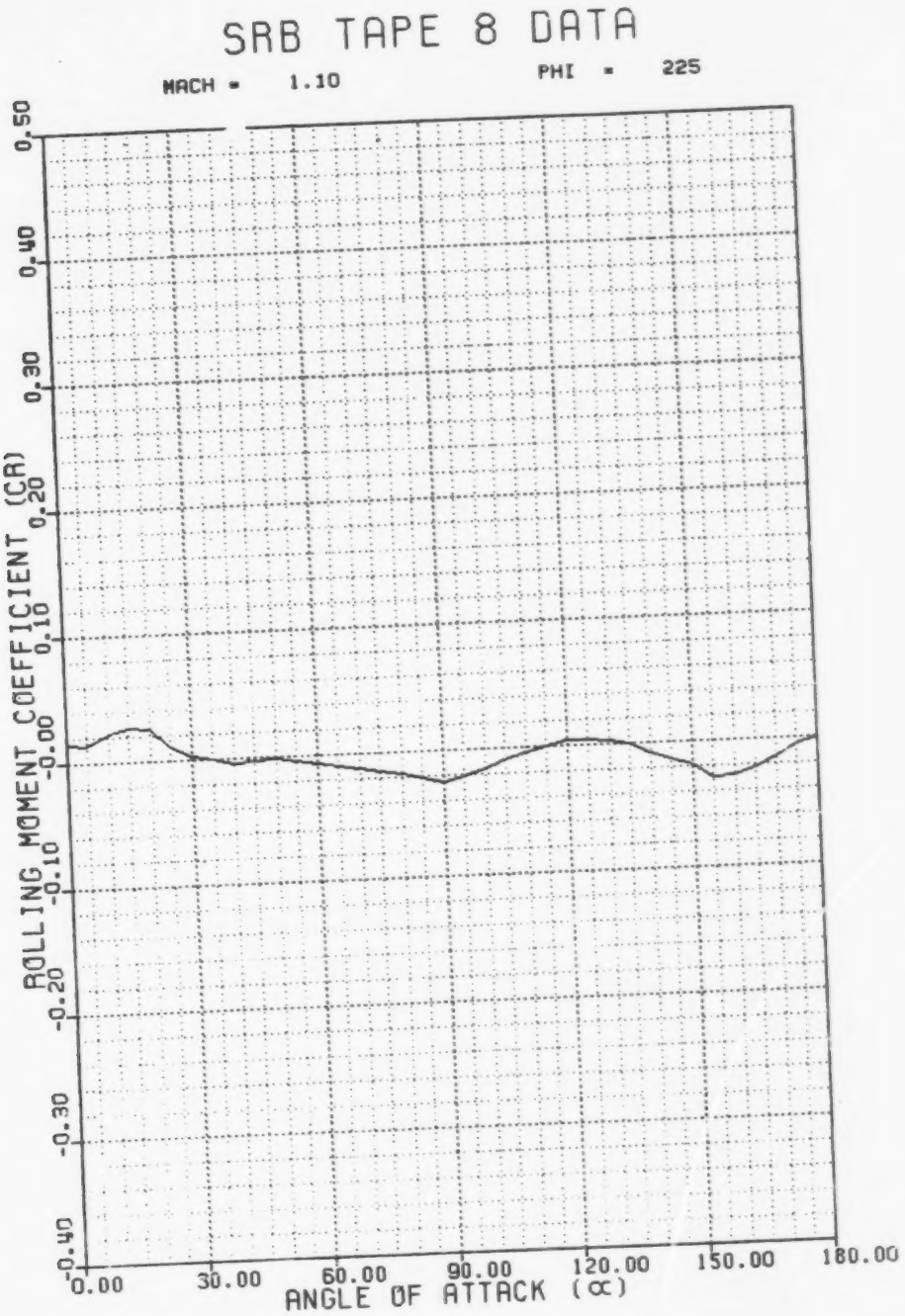
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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0.30
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-0.20
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30.00
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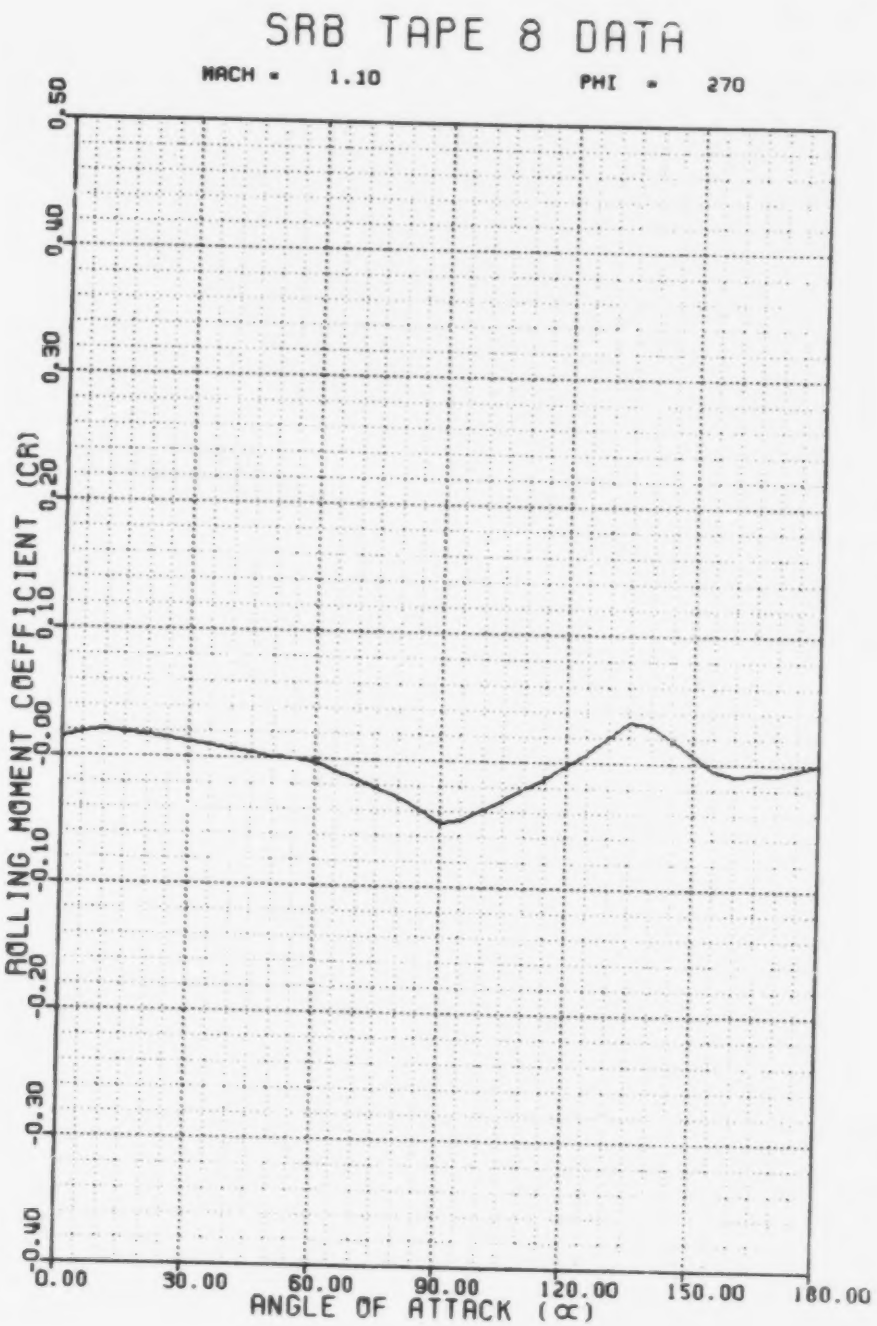
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-807


SRB TAPE 8 DATA
MACH = 1.10
PHI = 270
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30.00
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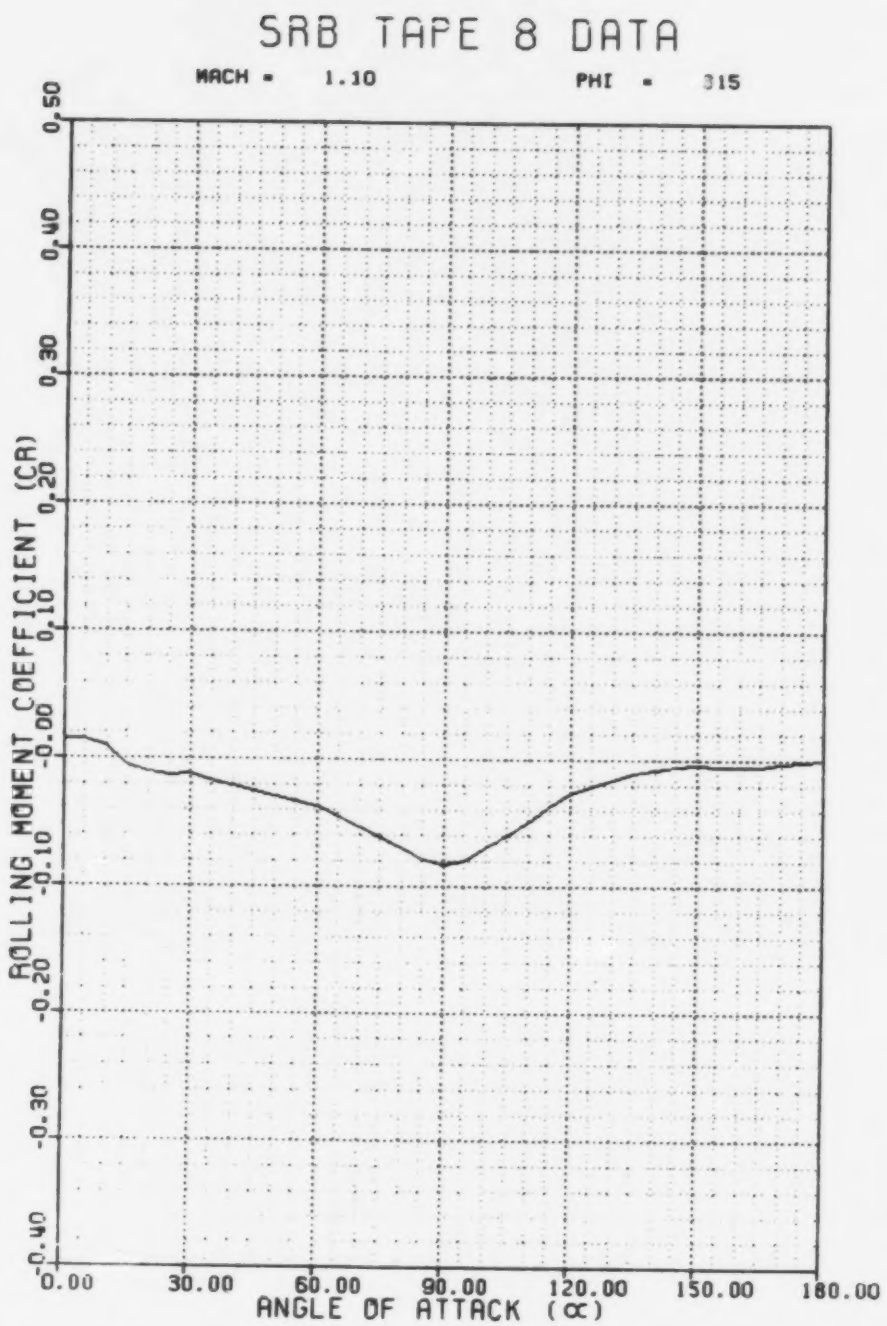
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 315
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-0.10
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0.00
30.00
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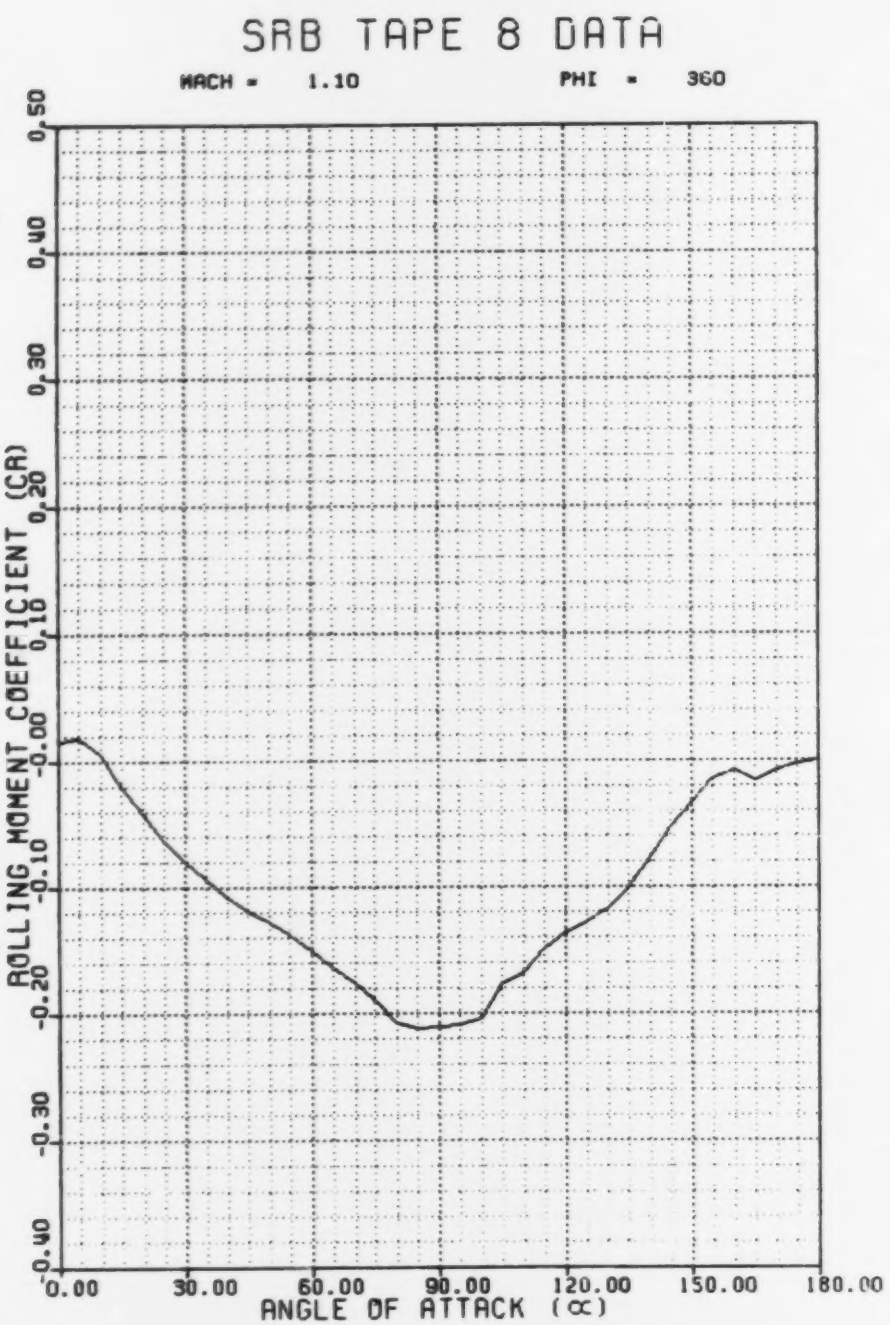
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.10
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
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-0.00
-0.10
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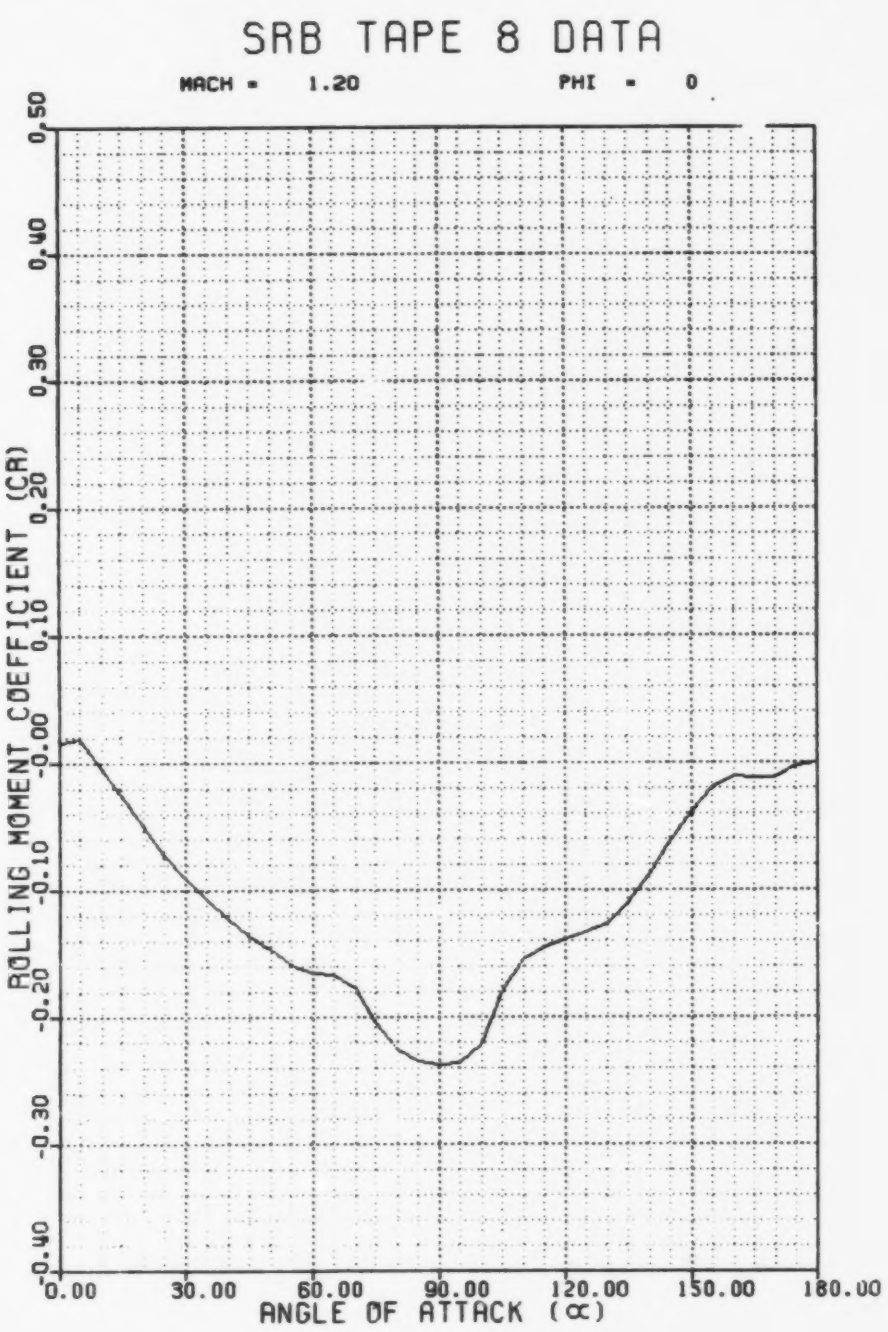
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 0
ROLLING MOMENT COEFFICIENT (CR)
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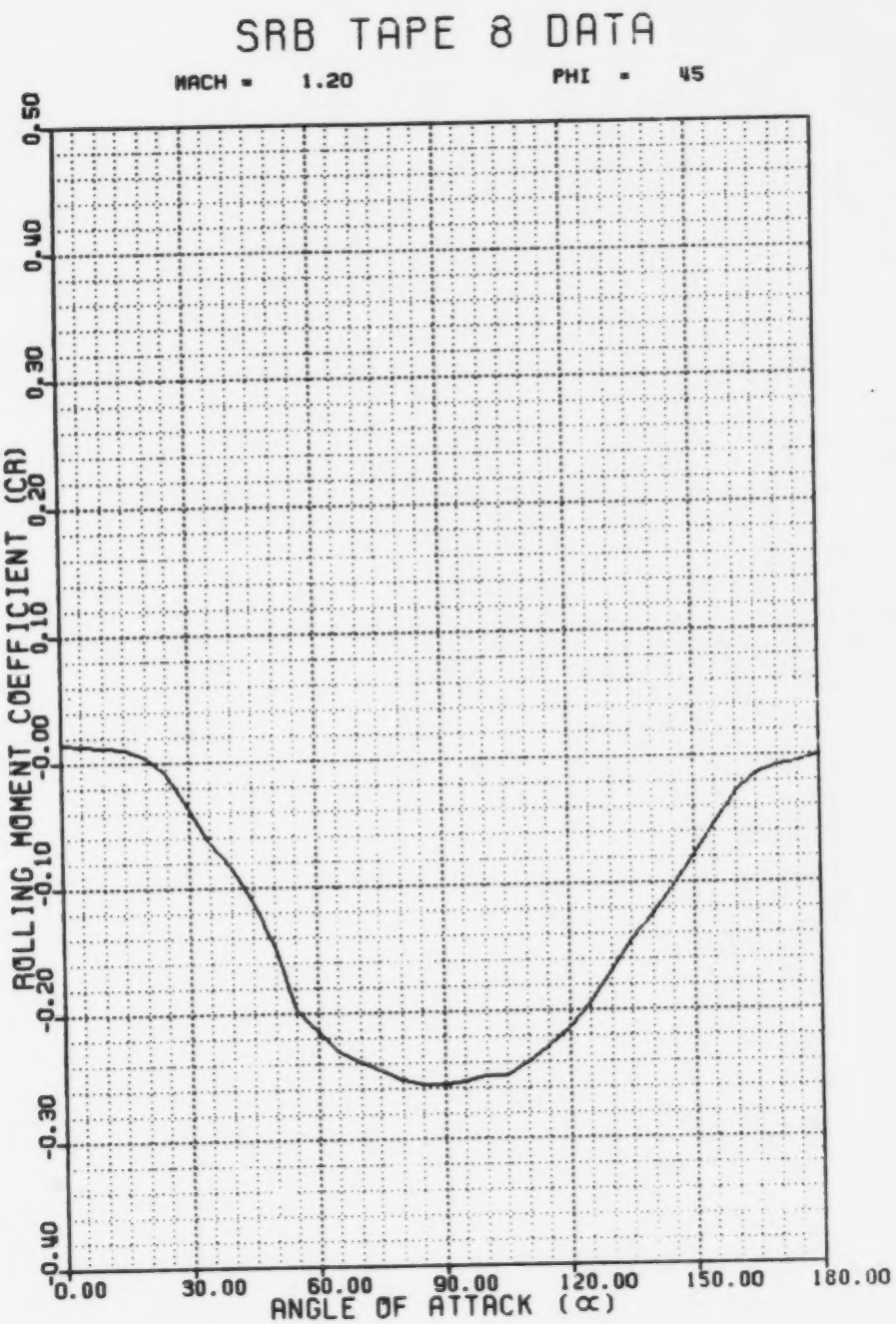
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 45
ROLLING MOMENT COEFFICIENT (CR)
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0.30
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0.00
-0.10
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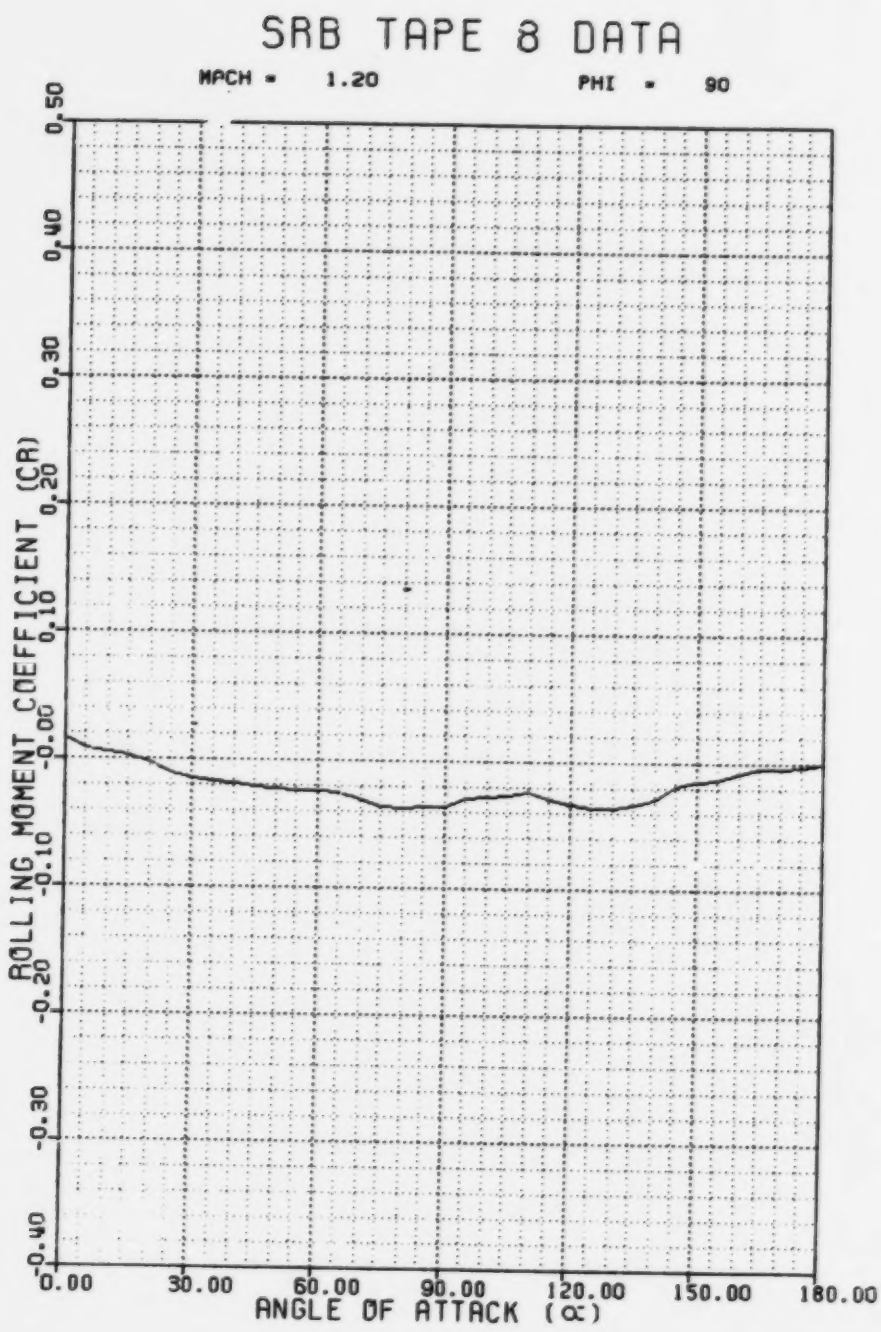
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 90
ROLLING MOMENT COEFFICIENT (CR)
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0.30
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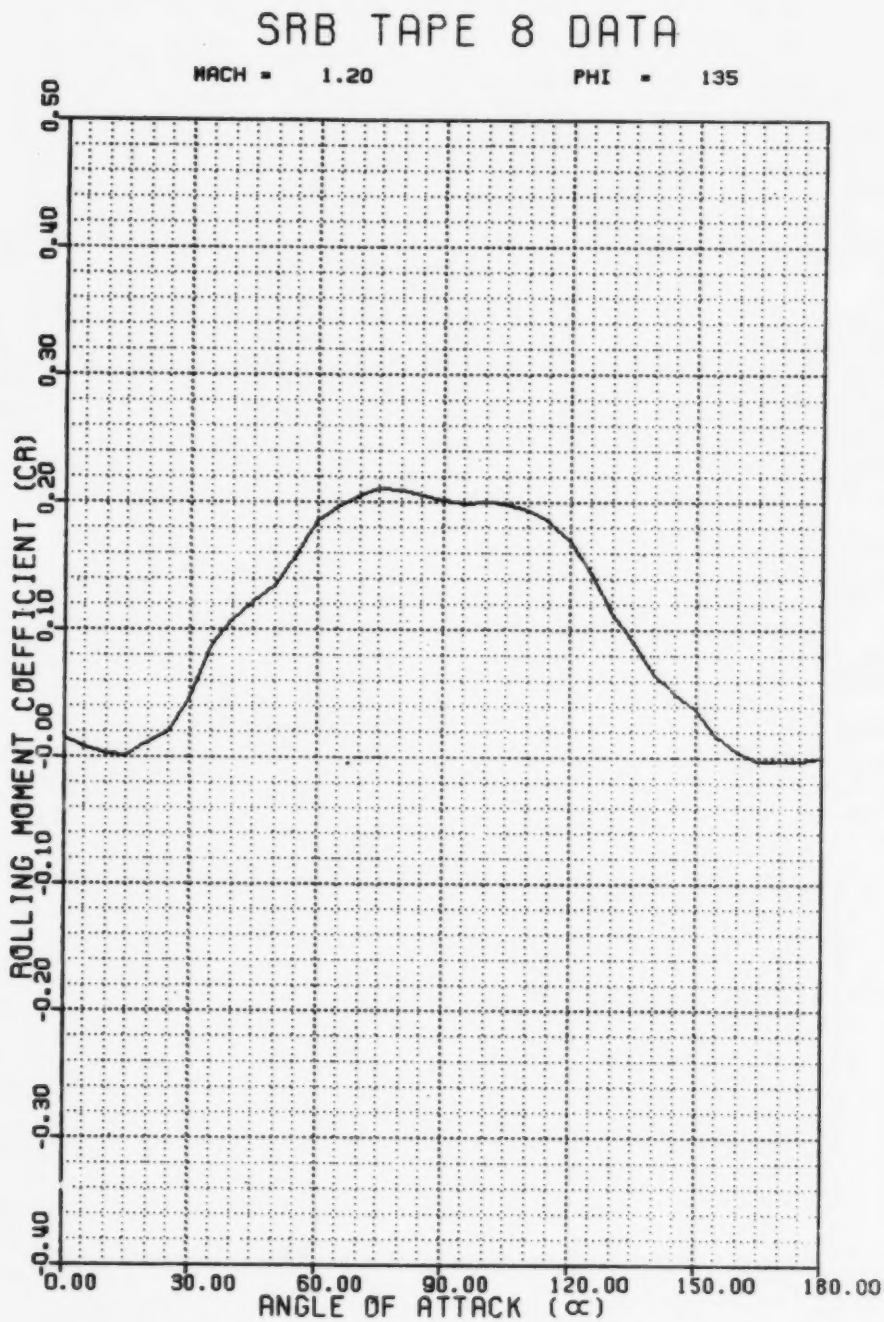
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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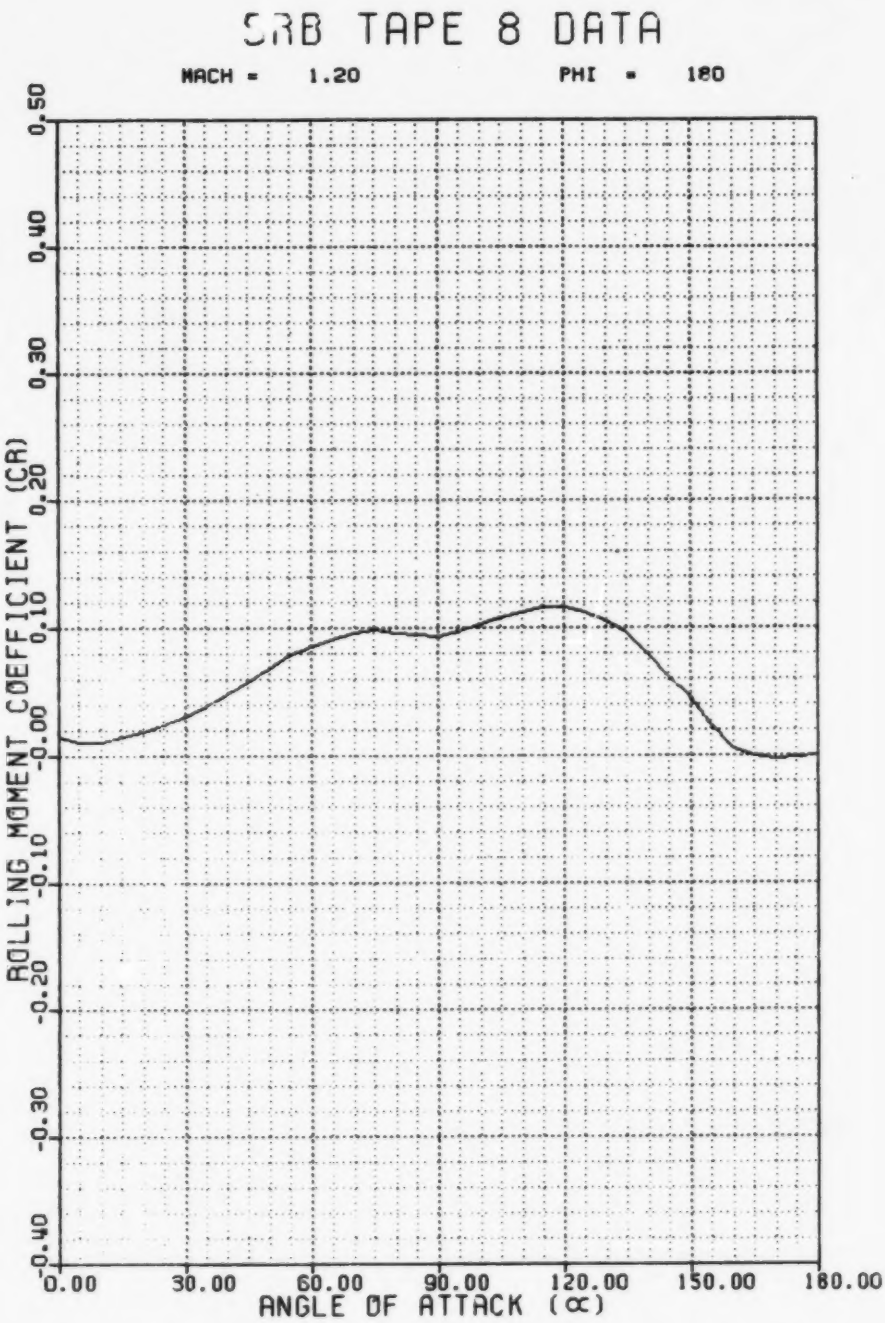
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
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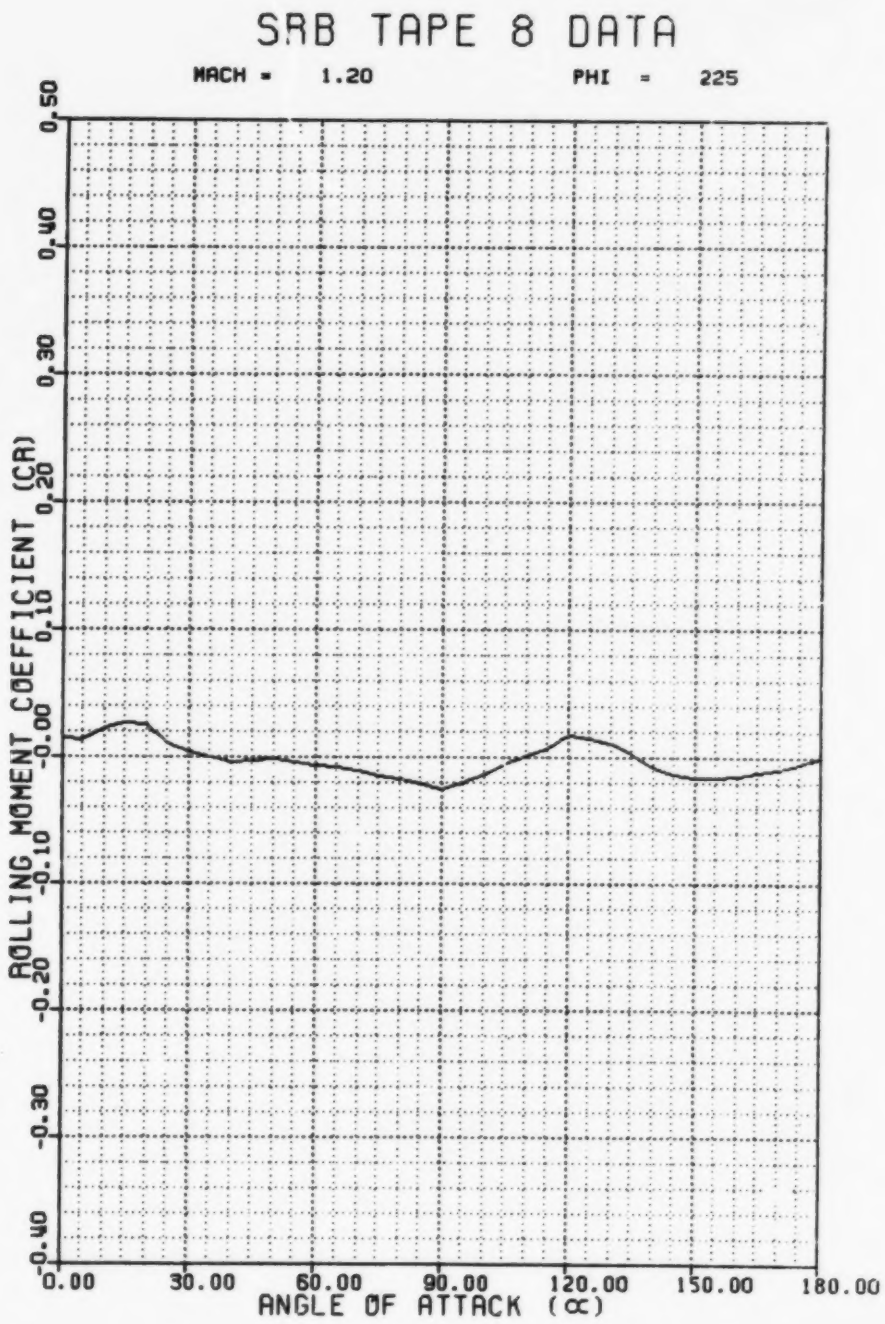
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.20
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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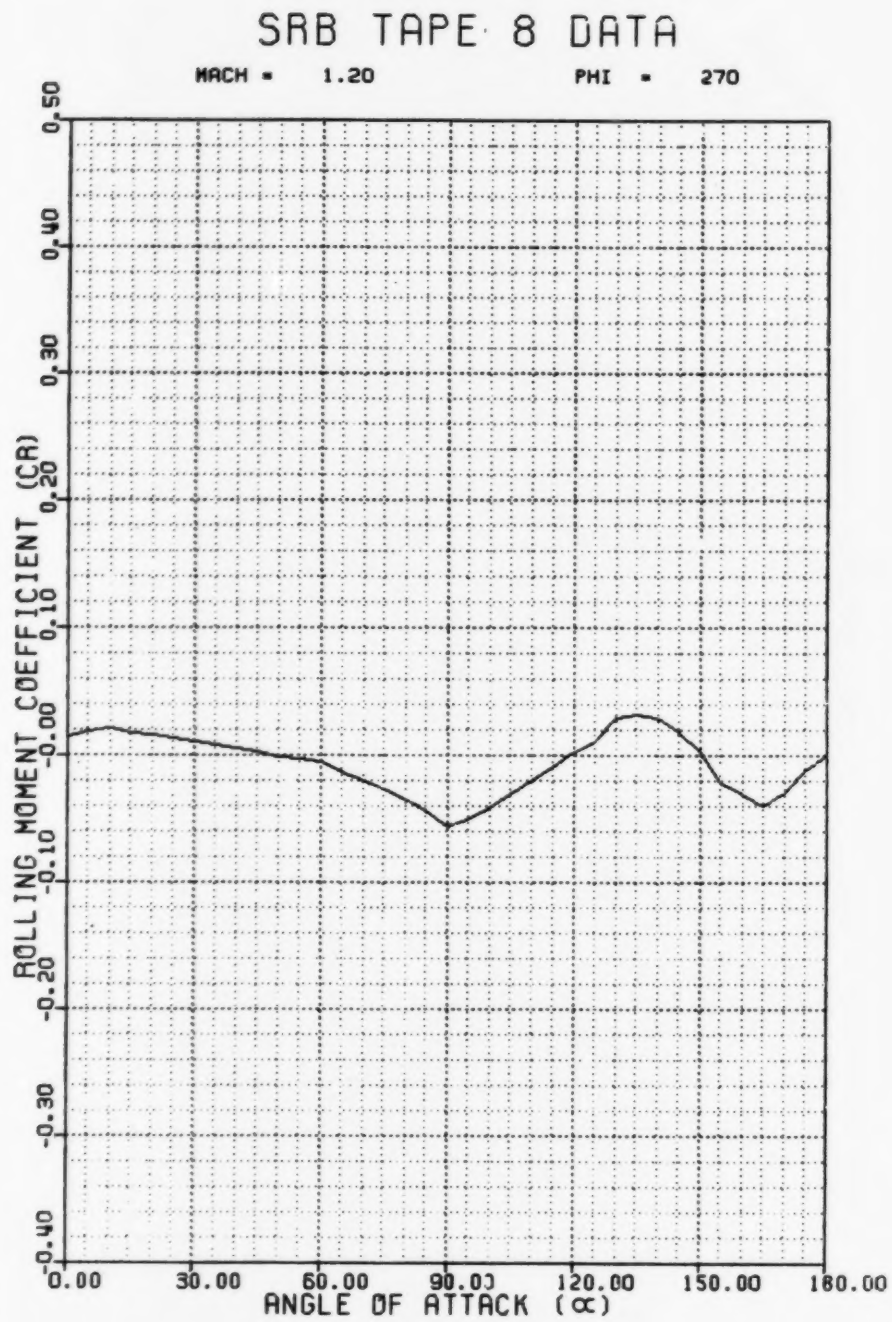
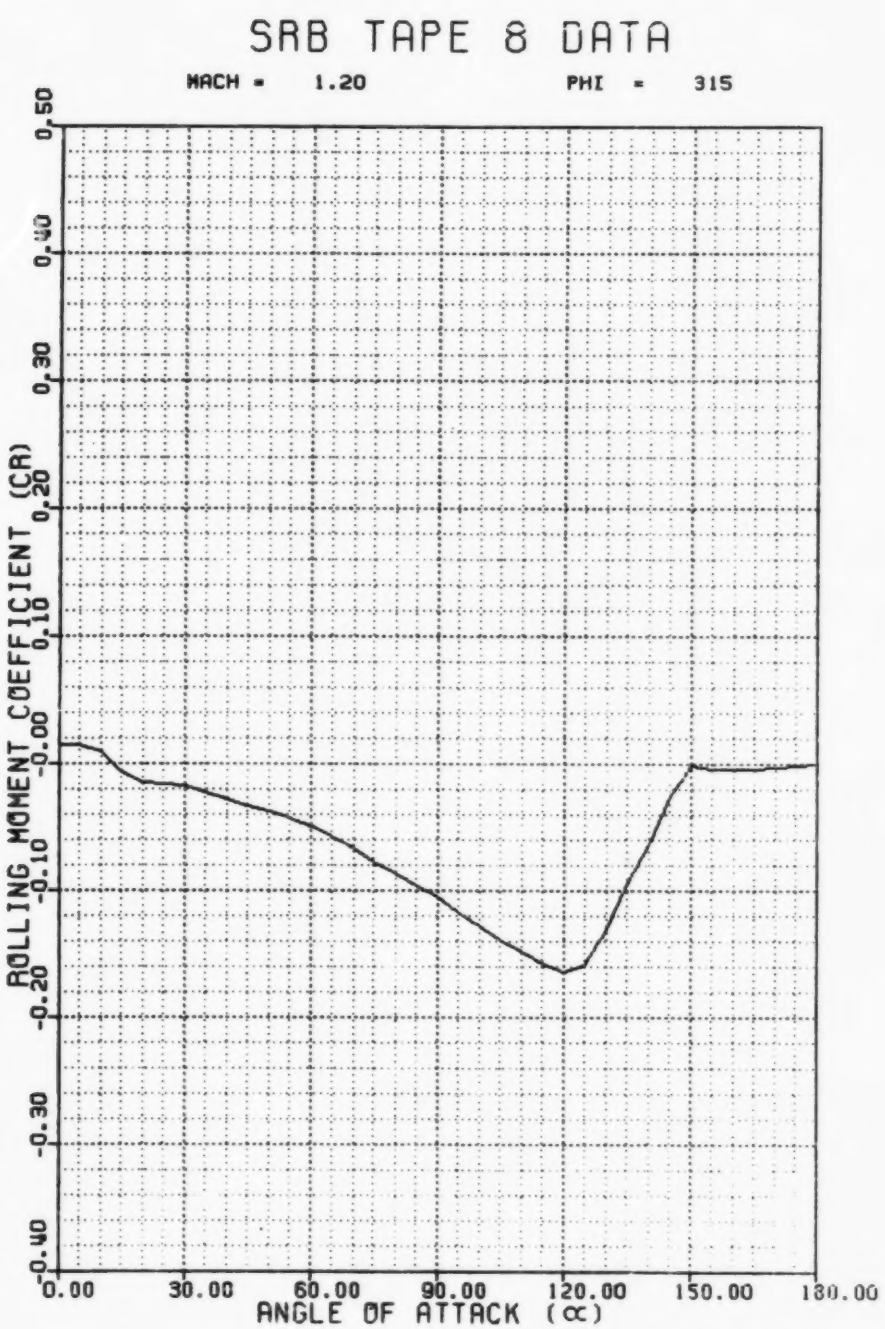
0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

ORIGINAL PAGE IS
OF POOR QUALITY

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MACH = 1.20
PHI = 315
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0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
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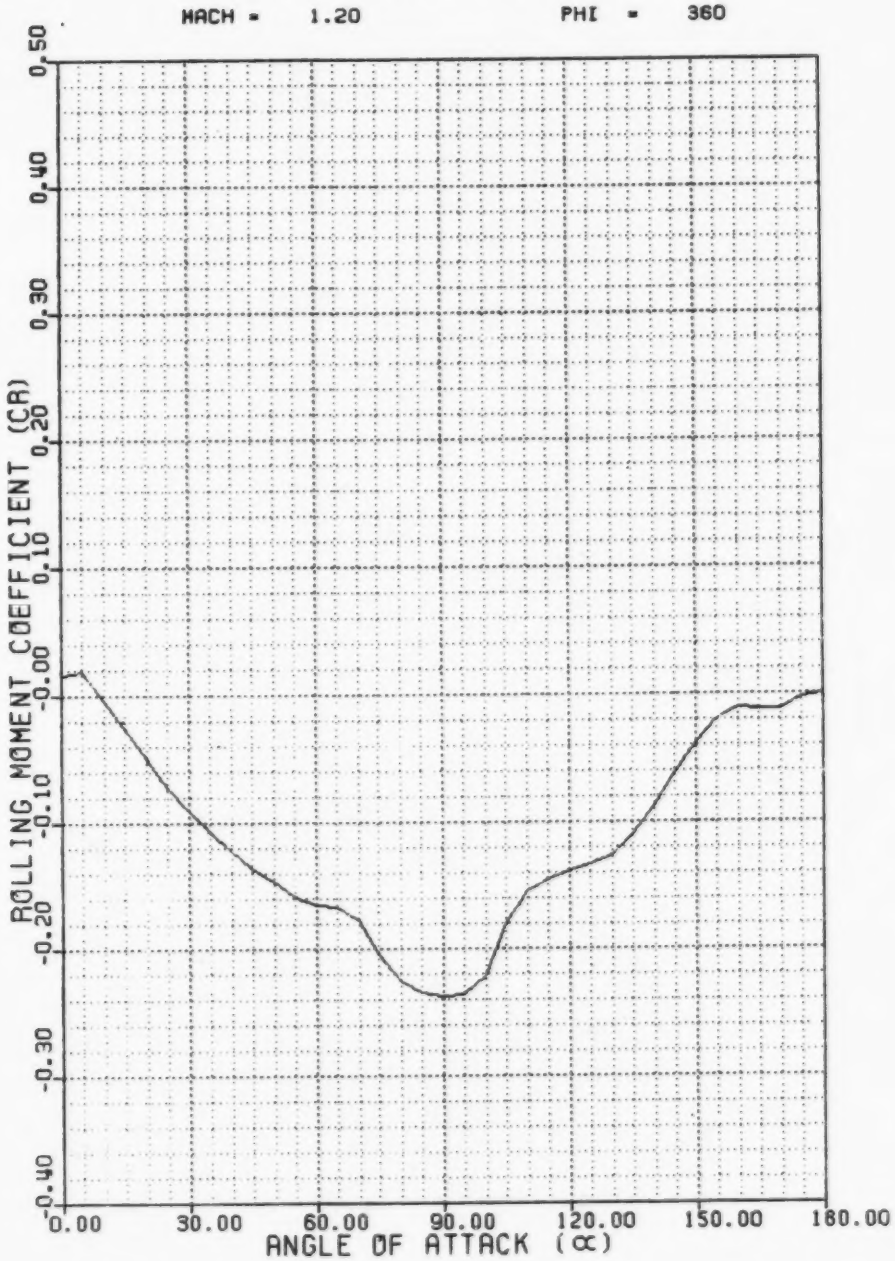
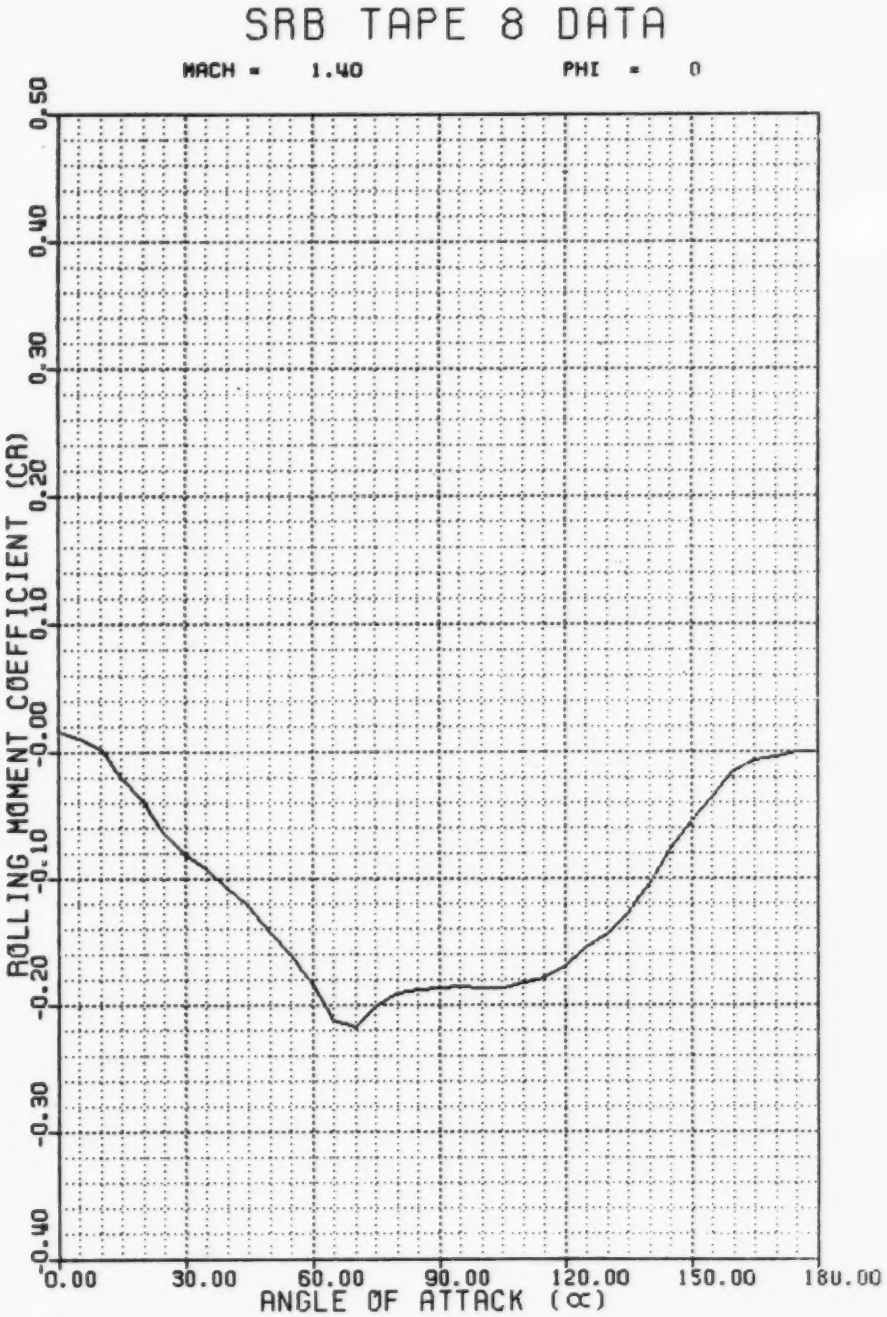
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 1.20 PHI = 360




SRB TAPE 8 DATA
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PHI = 0
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0.30
0.20
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-0.10
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0.00
30.00
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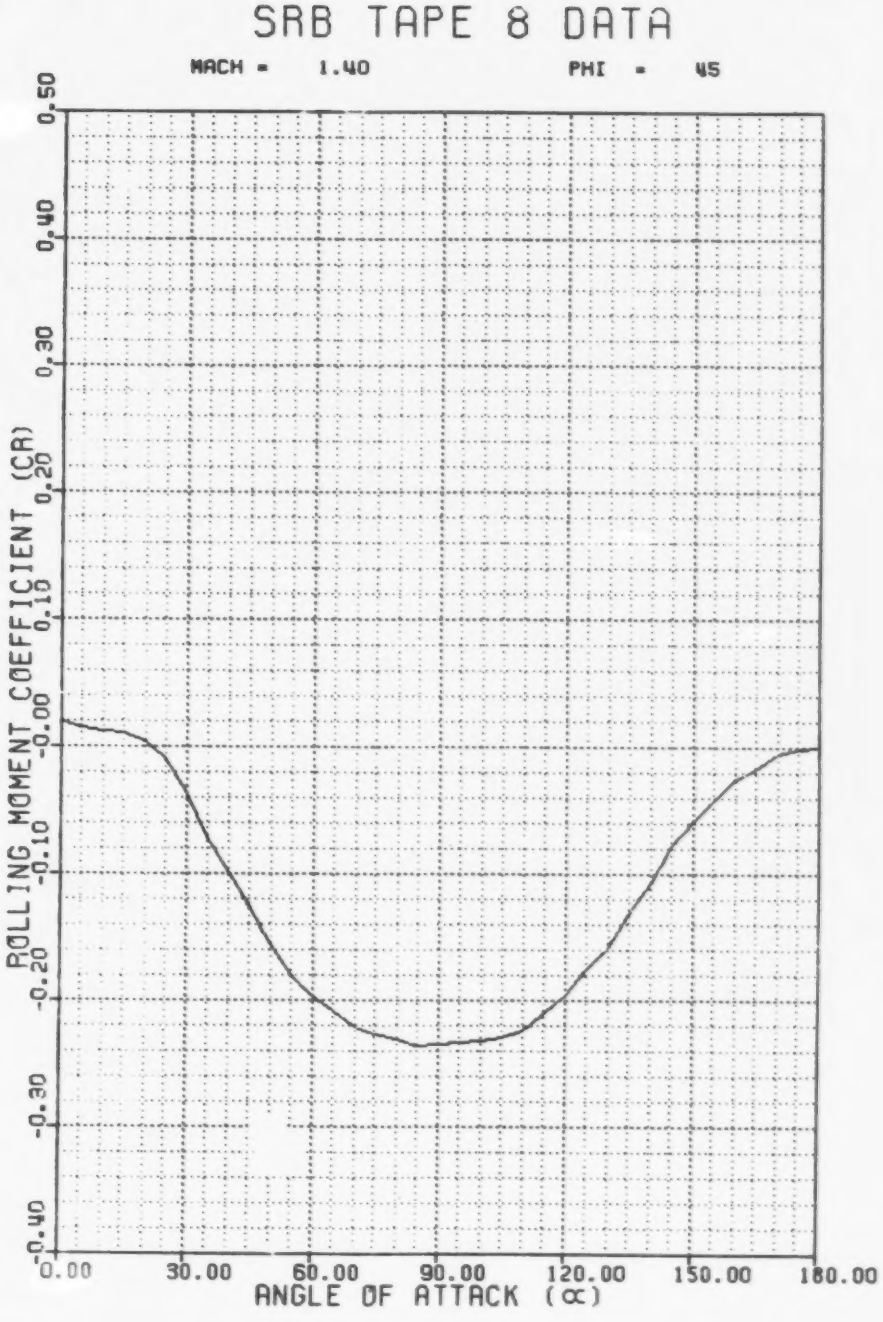
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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-0.10
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30.00
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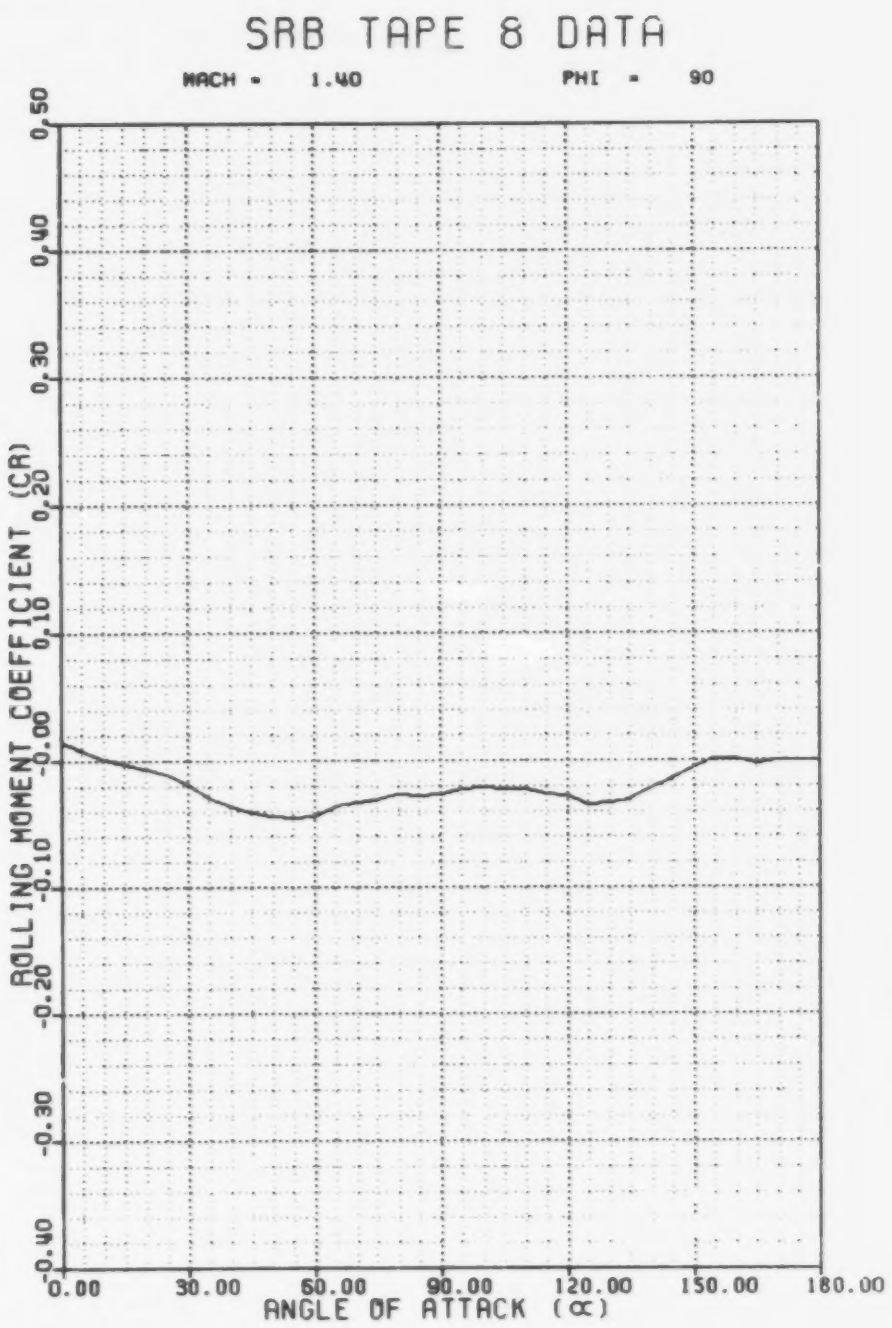
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
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0.00
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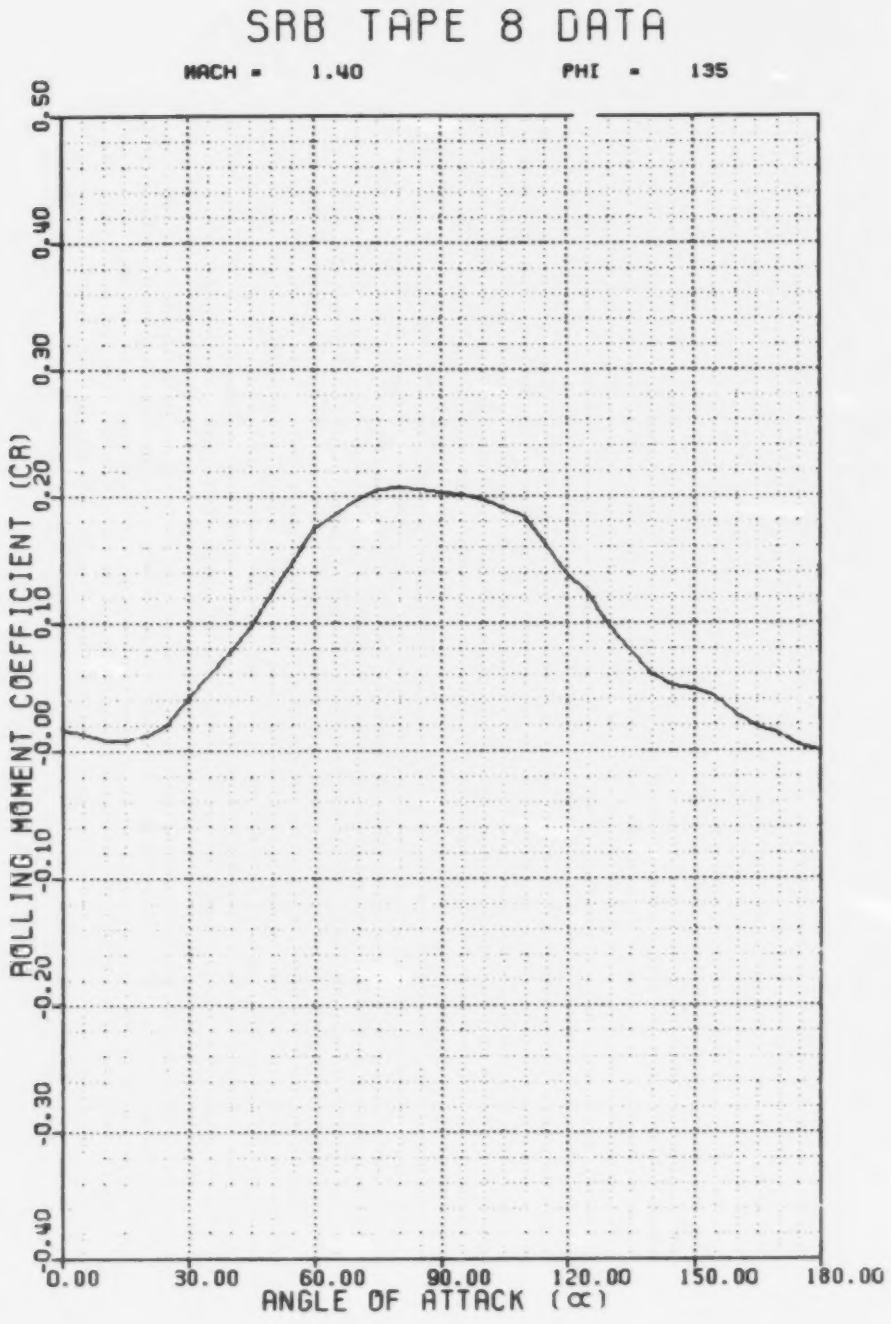
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.40
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-0.00
-0.10
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0.00
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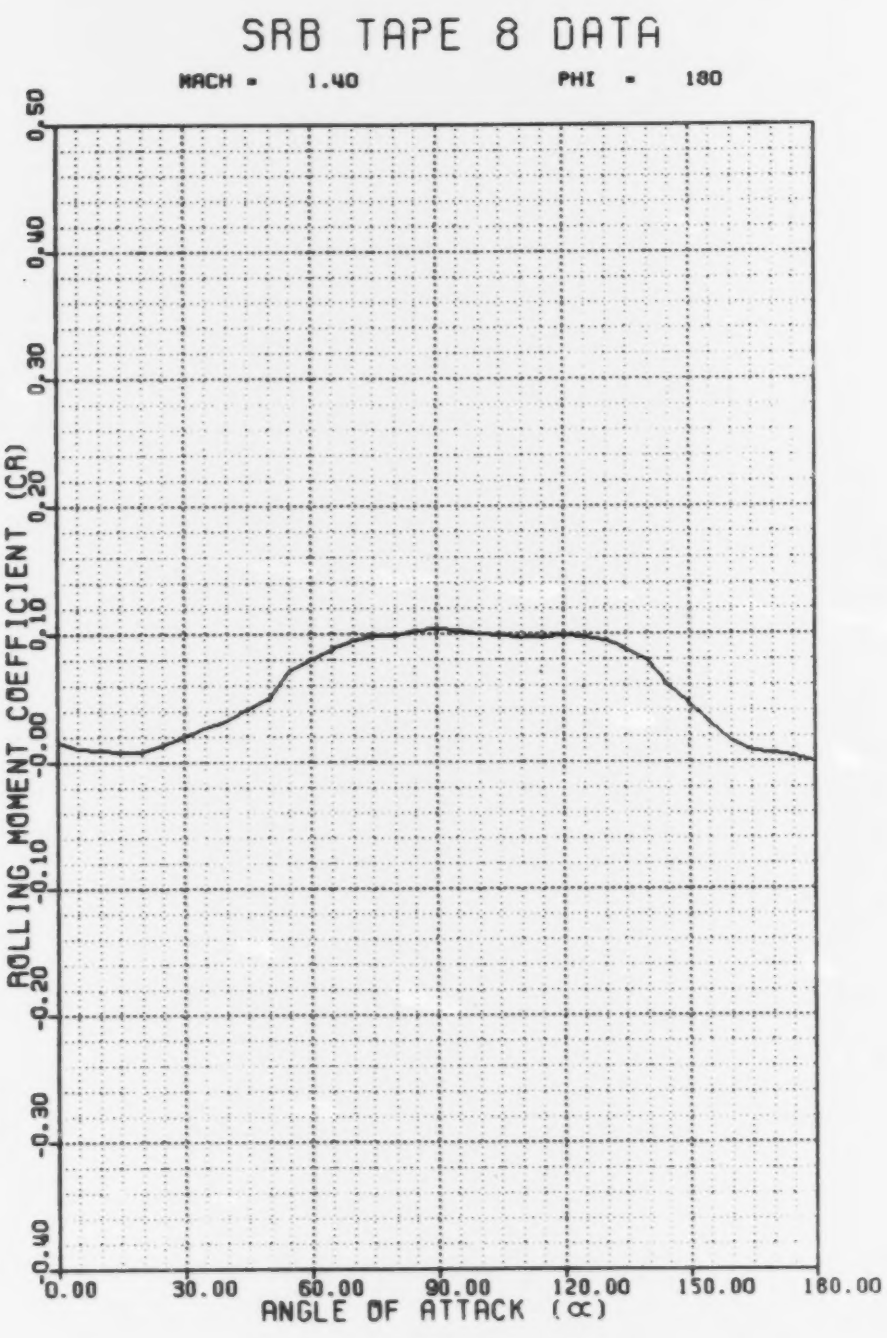
150.00
180.00
ANGLE OF ATTACK (α)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PHI = 180
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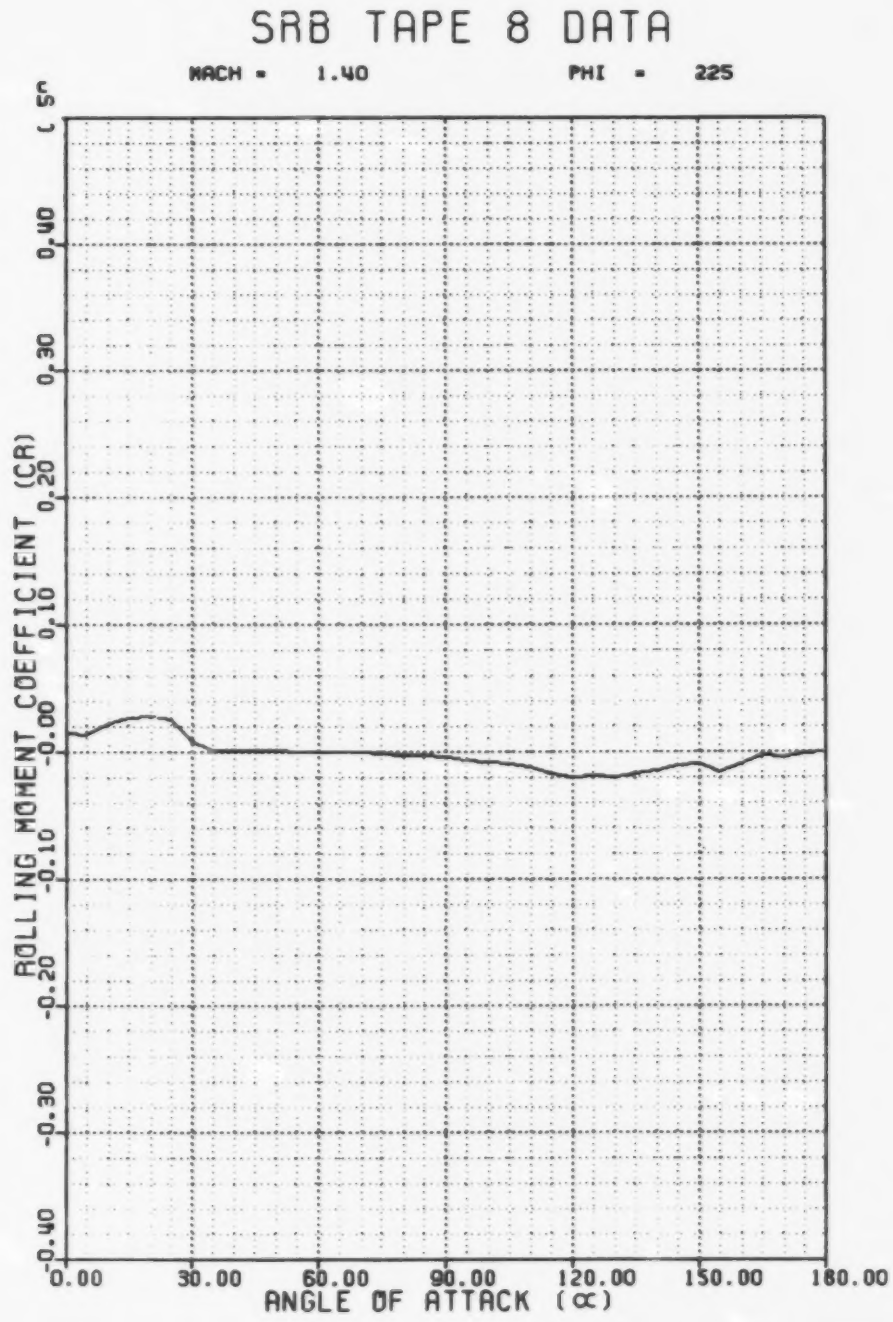
ANGLE OF ATTACK (α)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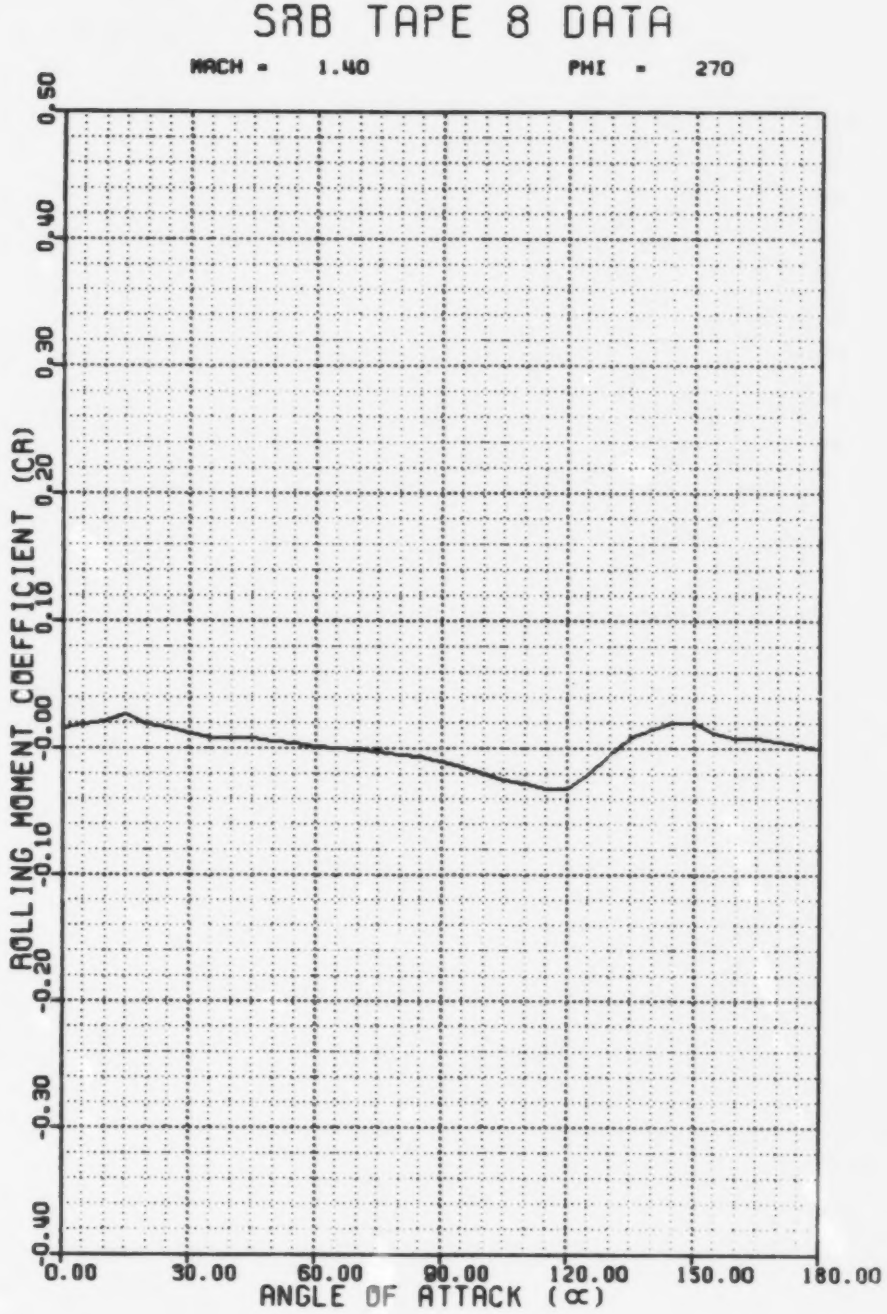
180.00
ANGLE OF ATTACK (α)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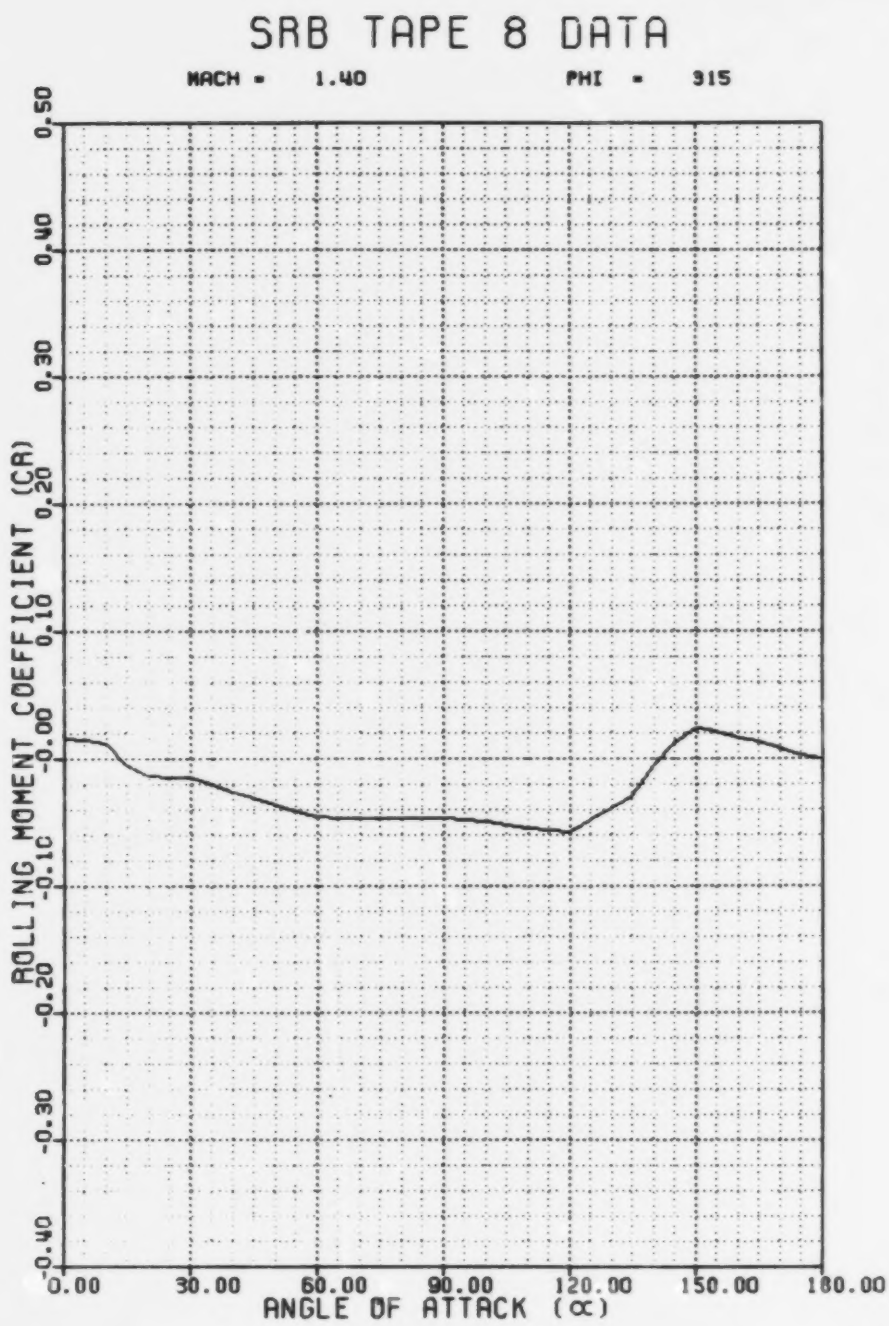
ANGLE OF ATTACK (α)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PHI = 315
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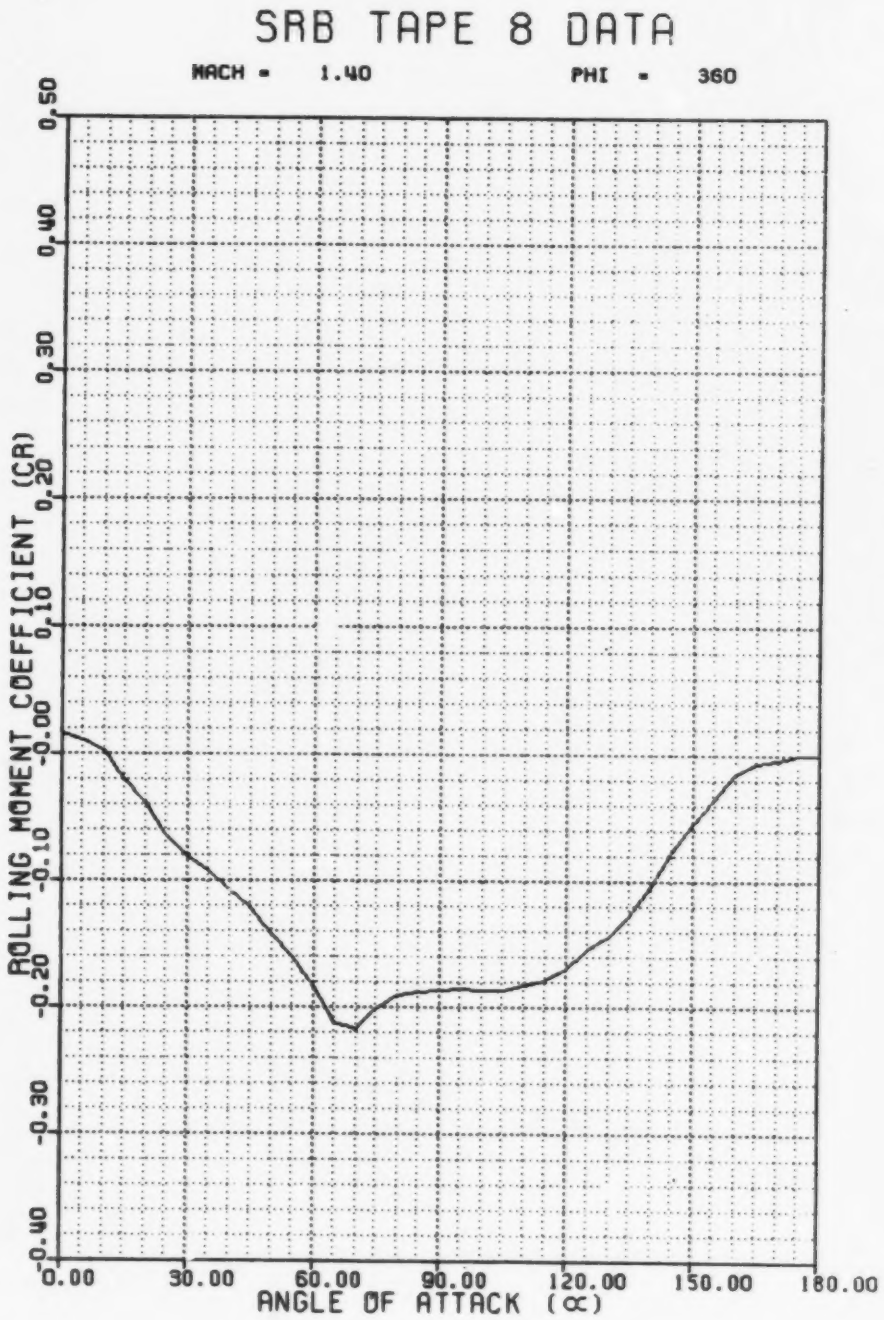
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
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PHI = 360
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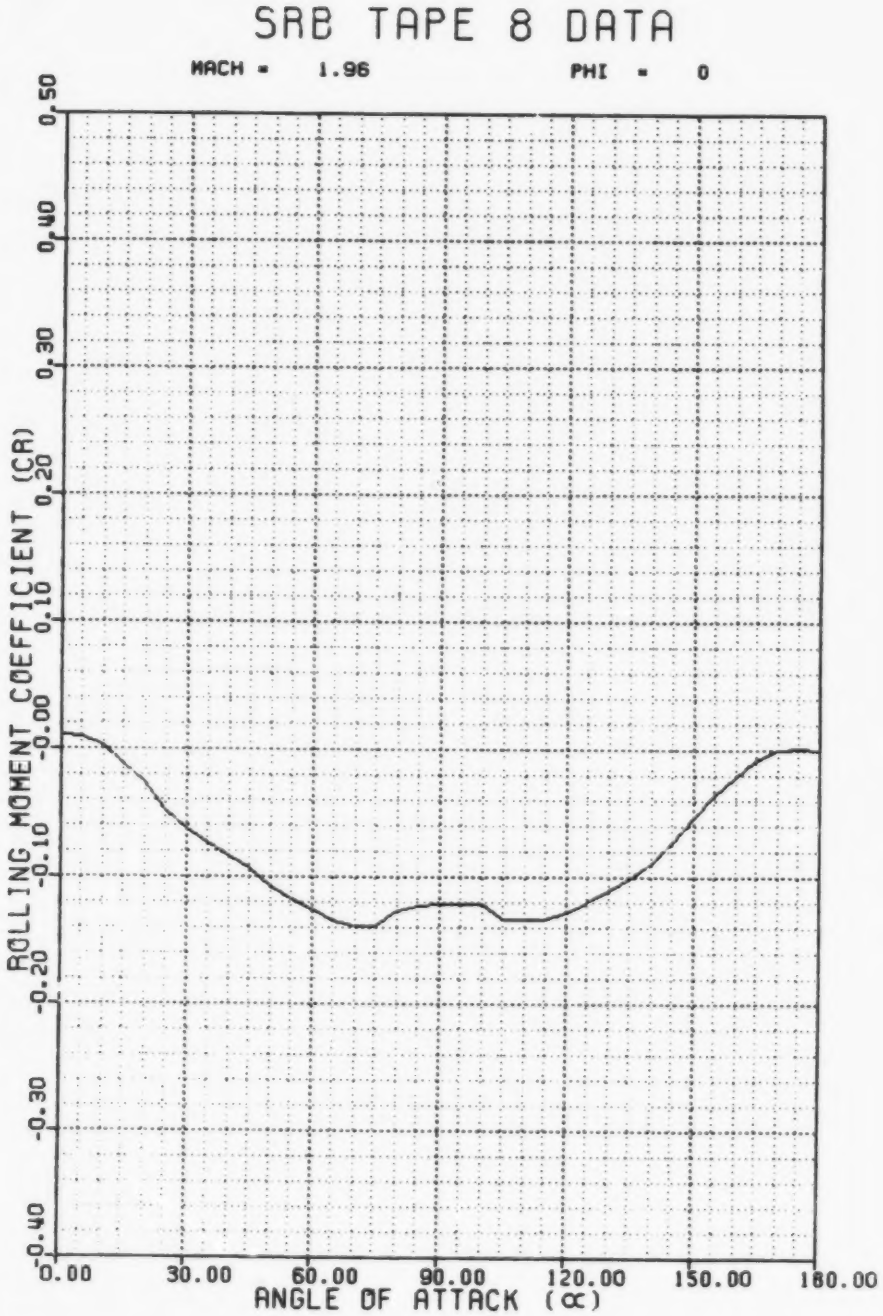
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.00
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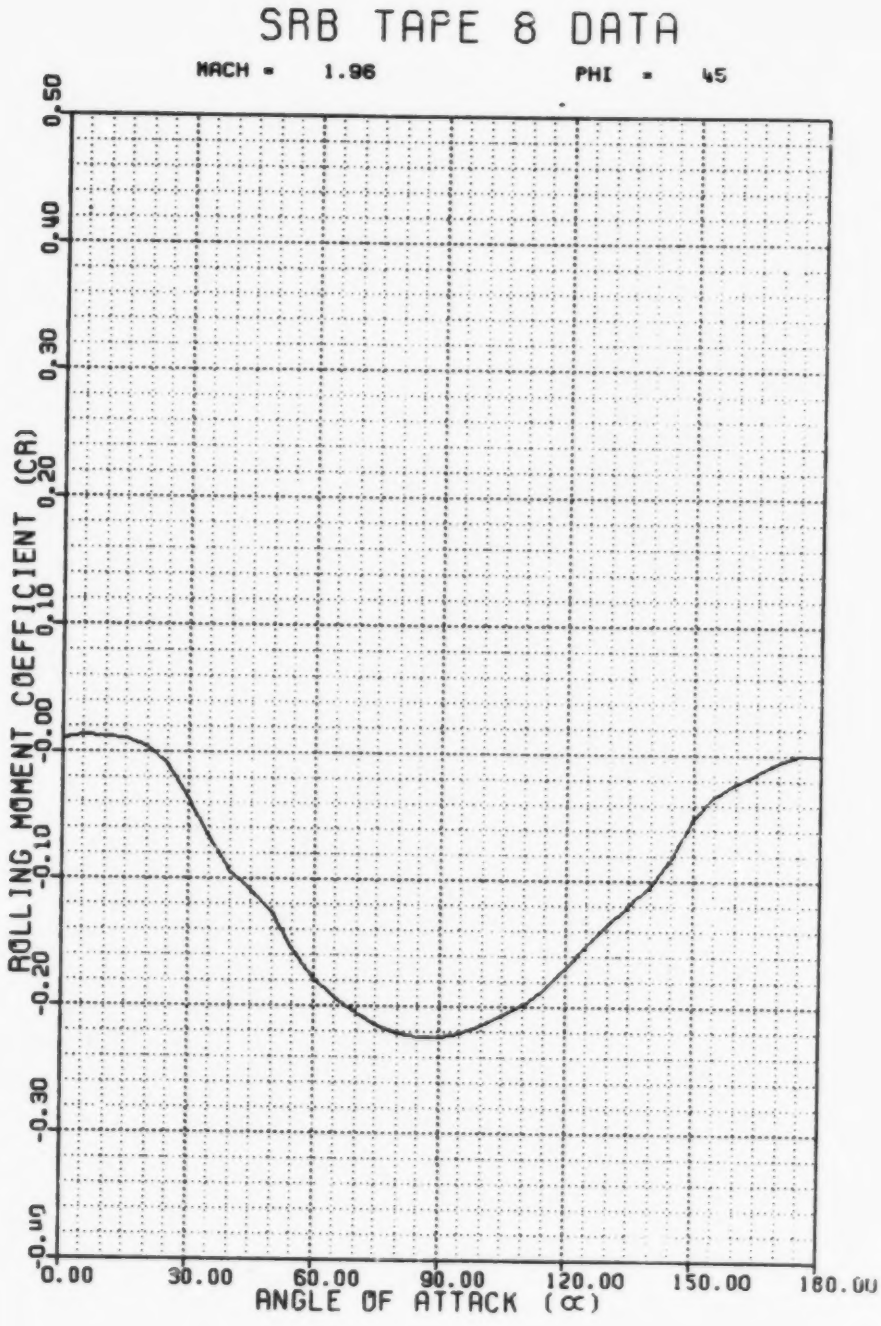
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 45
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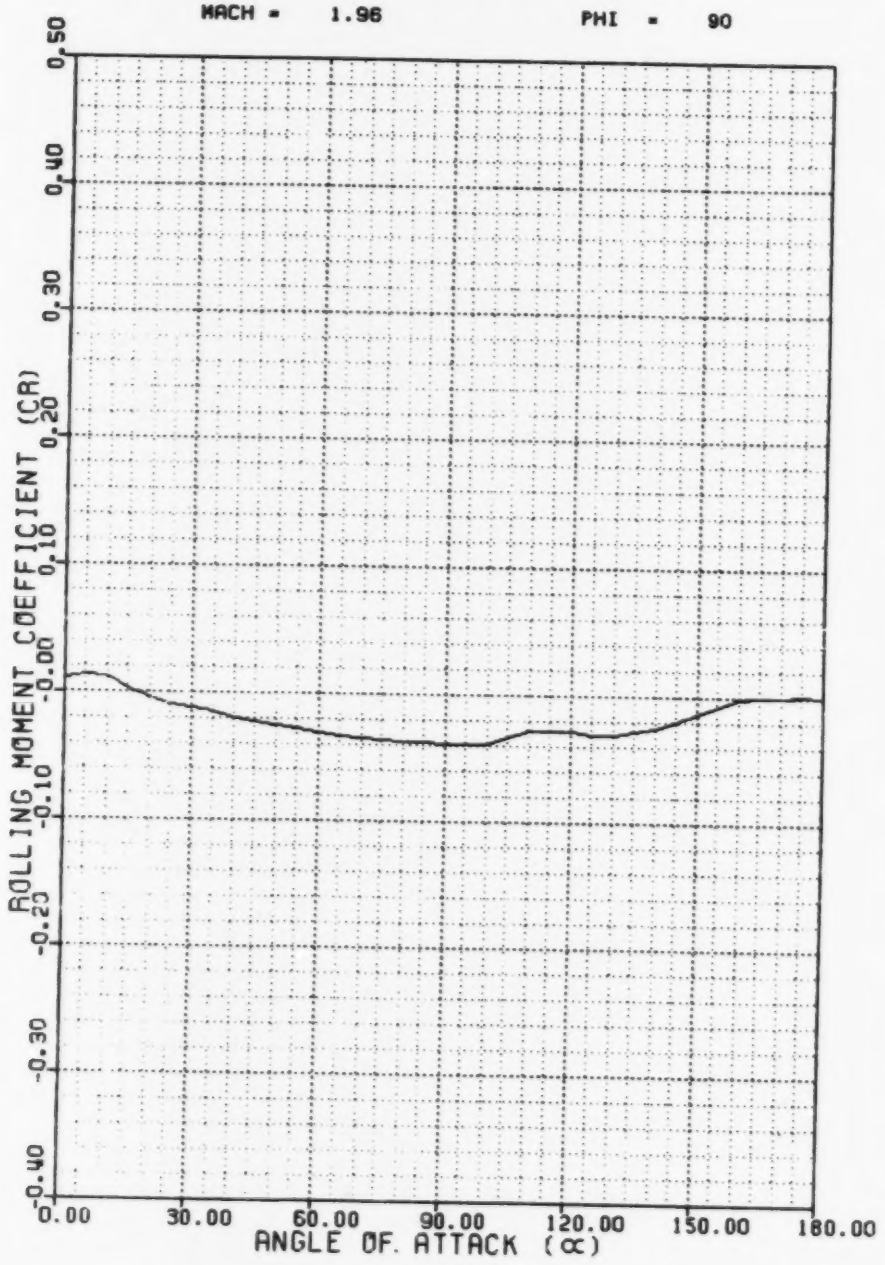
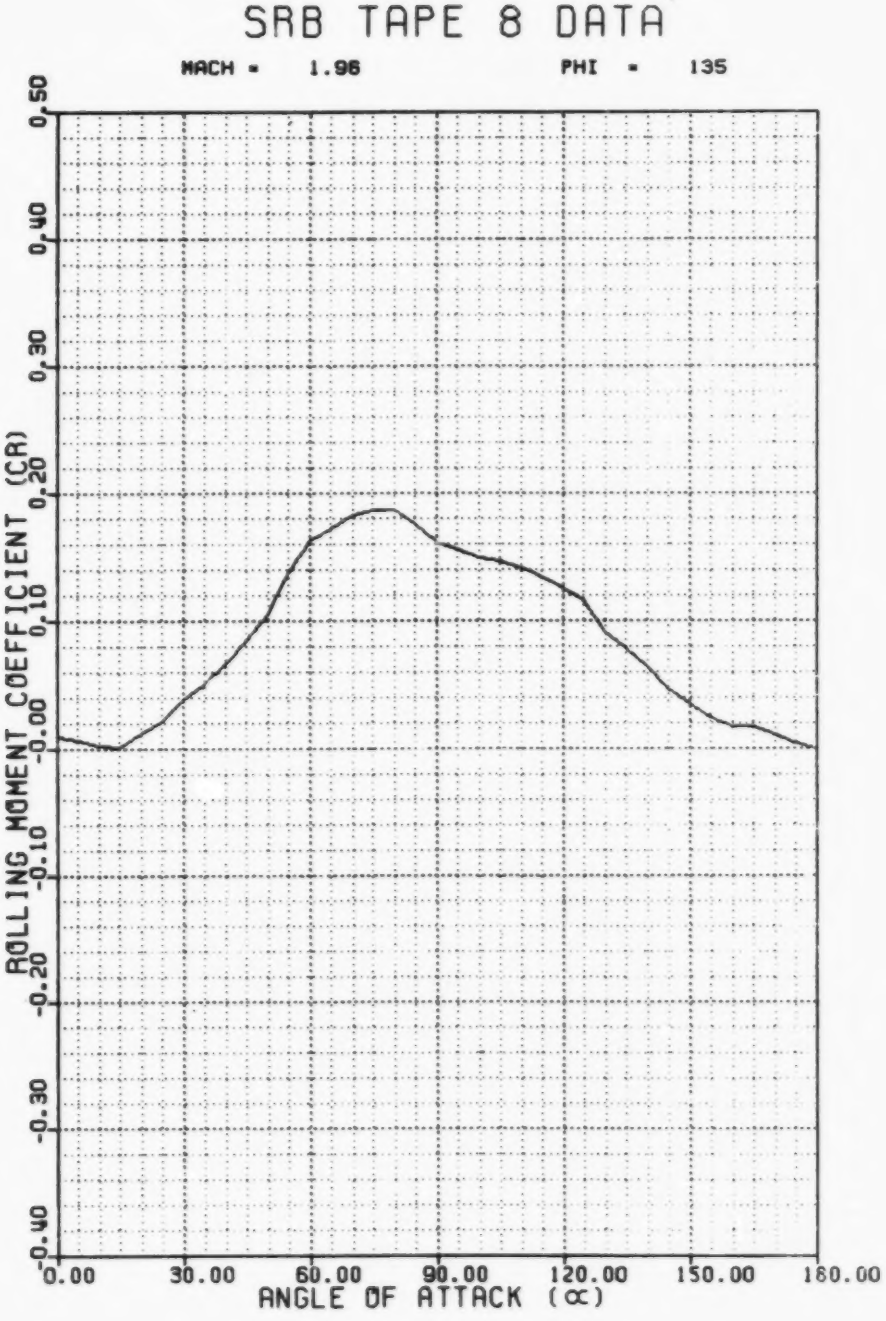
150.00
180.00
ANGLE OF ATTACK (α)

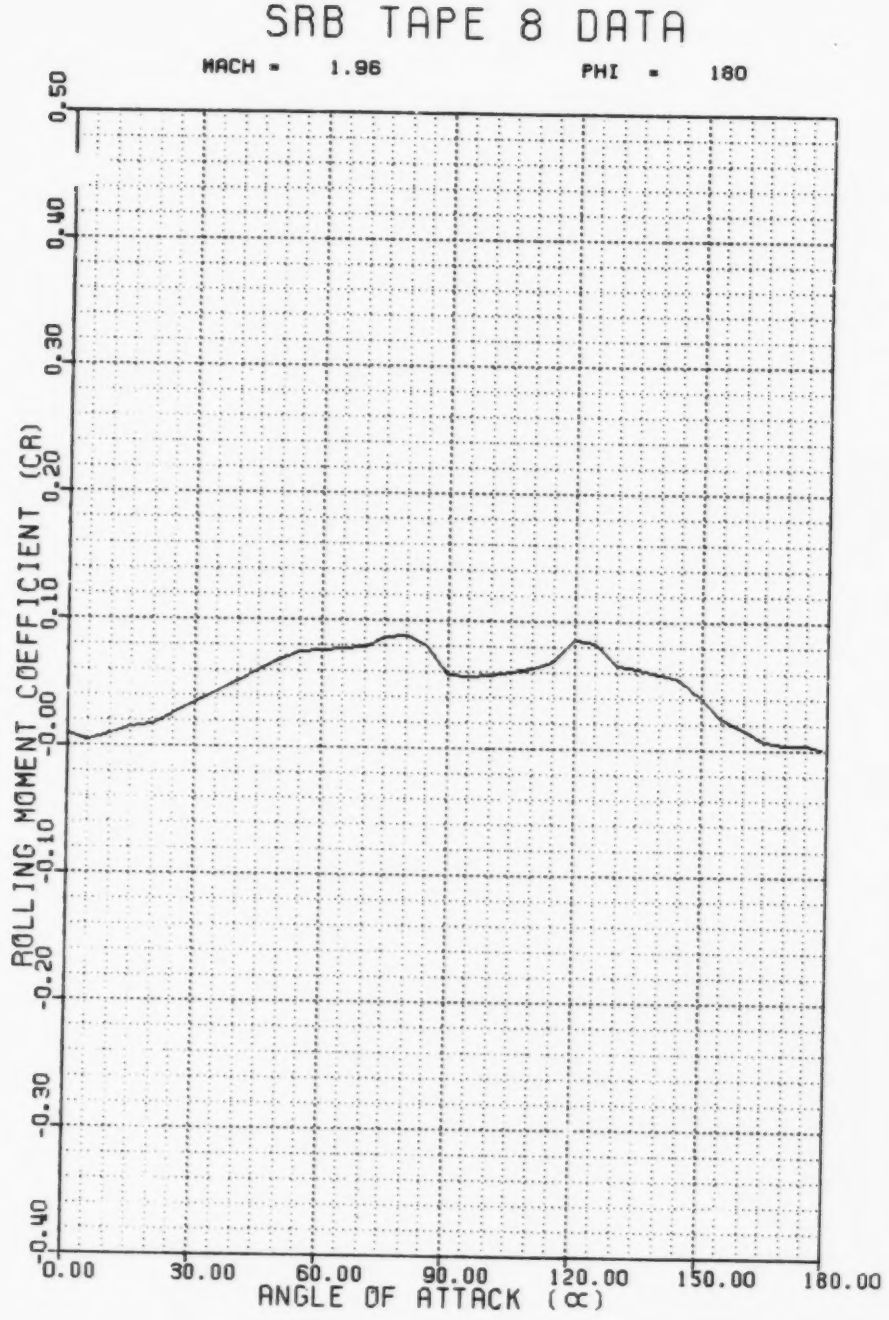
SRB TAPE 8 DATA

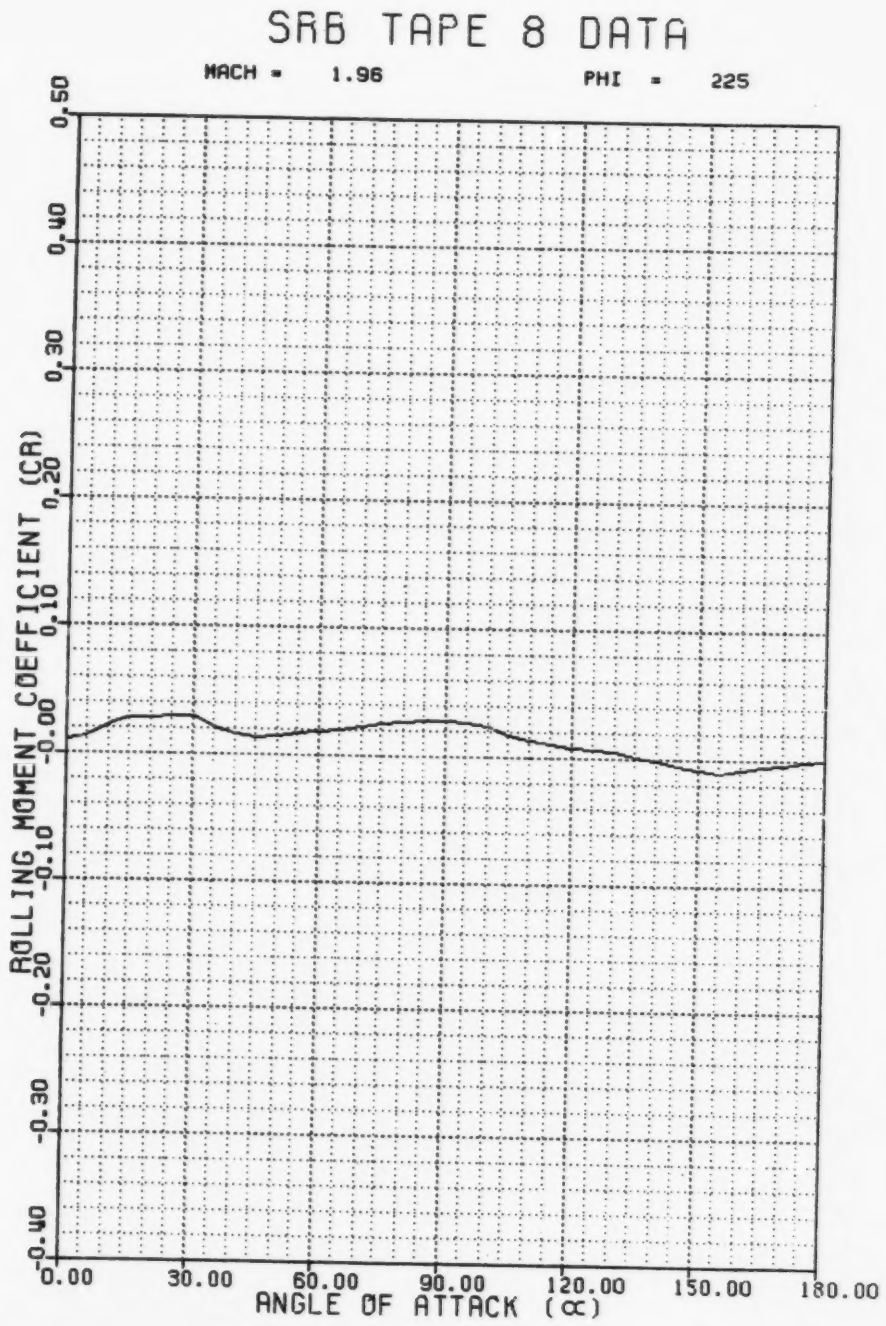
MACH = 1.96 PHI = 90




SRB TAPE 8 DATA
MACH = 1.98
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-892


SRB TAPE 8 DATA
MACH = 1.96
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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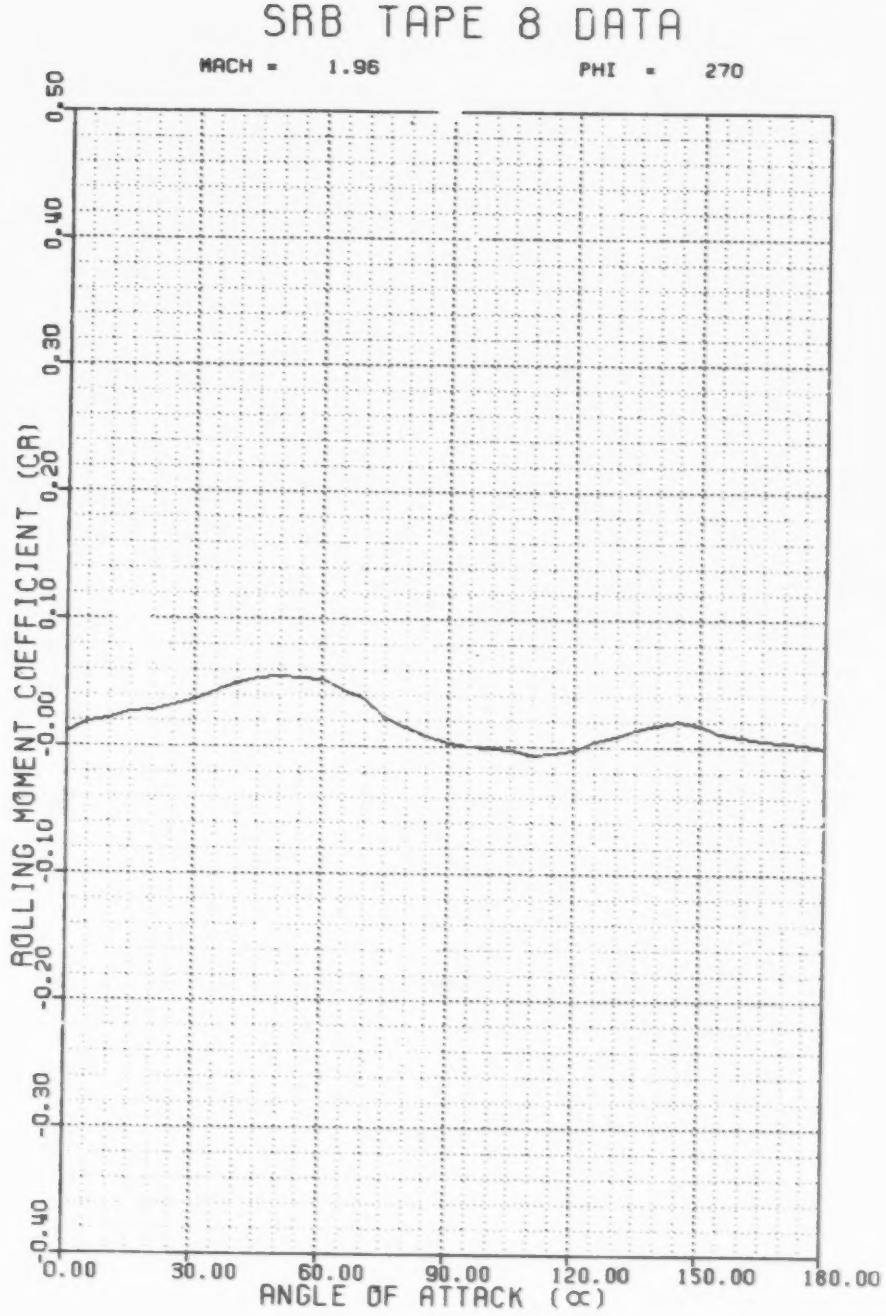
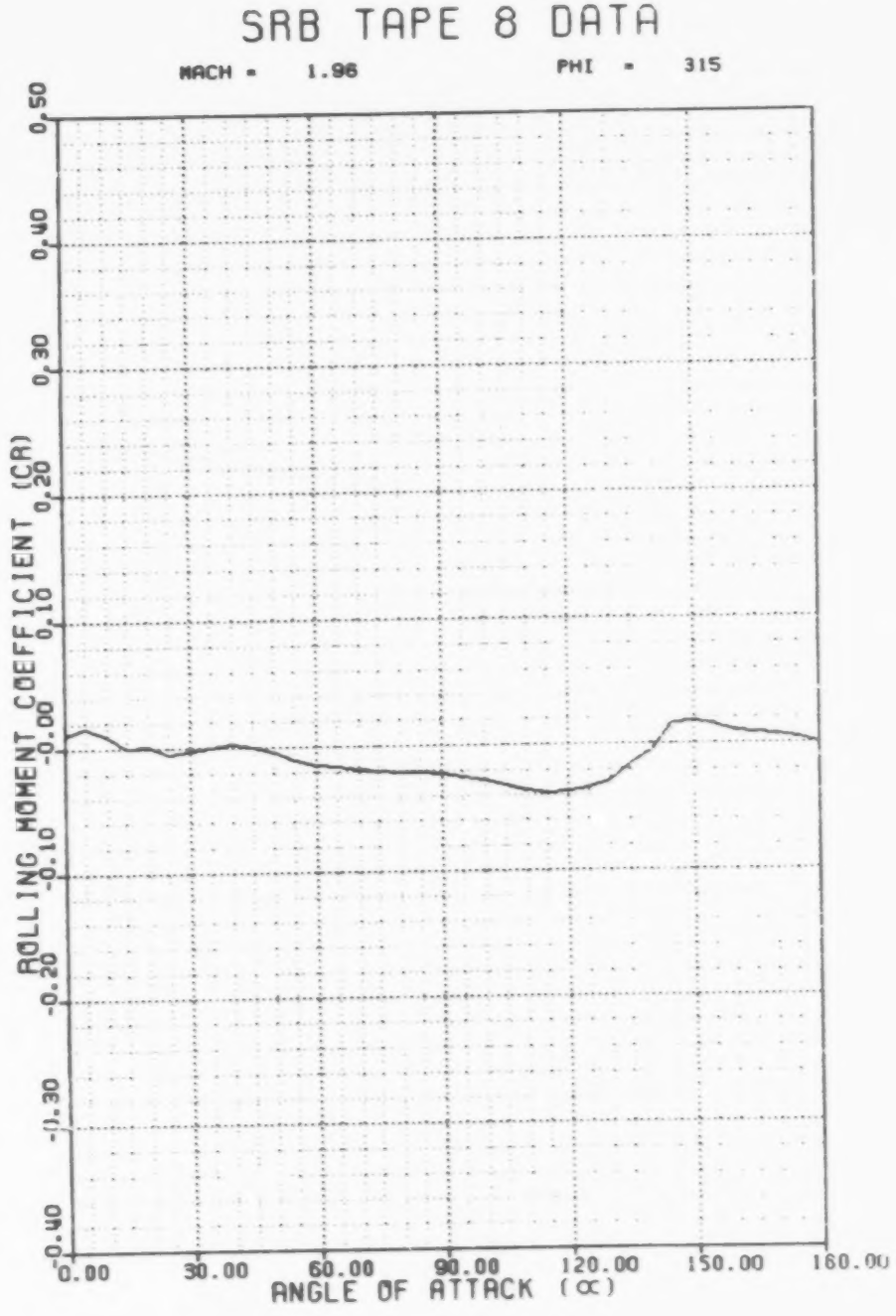
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-834


SRB TAPE 8 DATA
MACH = 1.96
PHI = 270
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 315
ROLLING MOMENT COEFFICIENT (CR)
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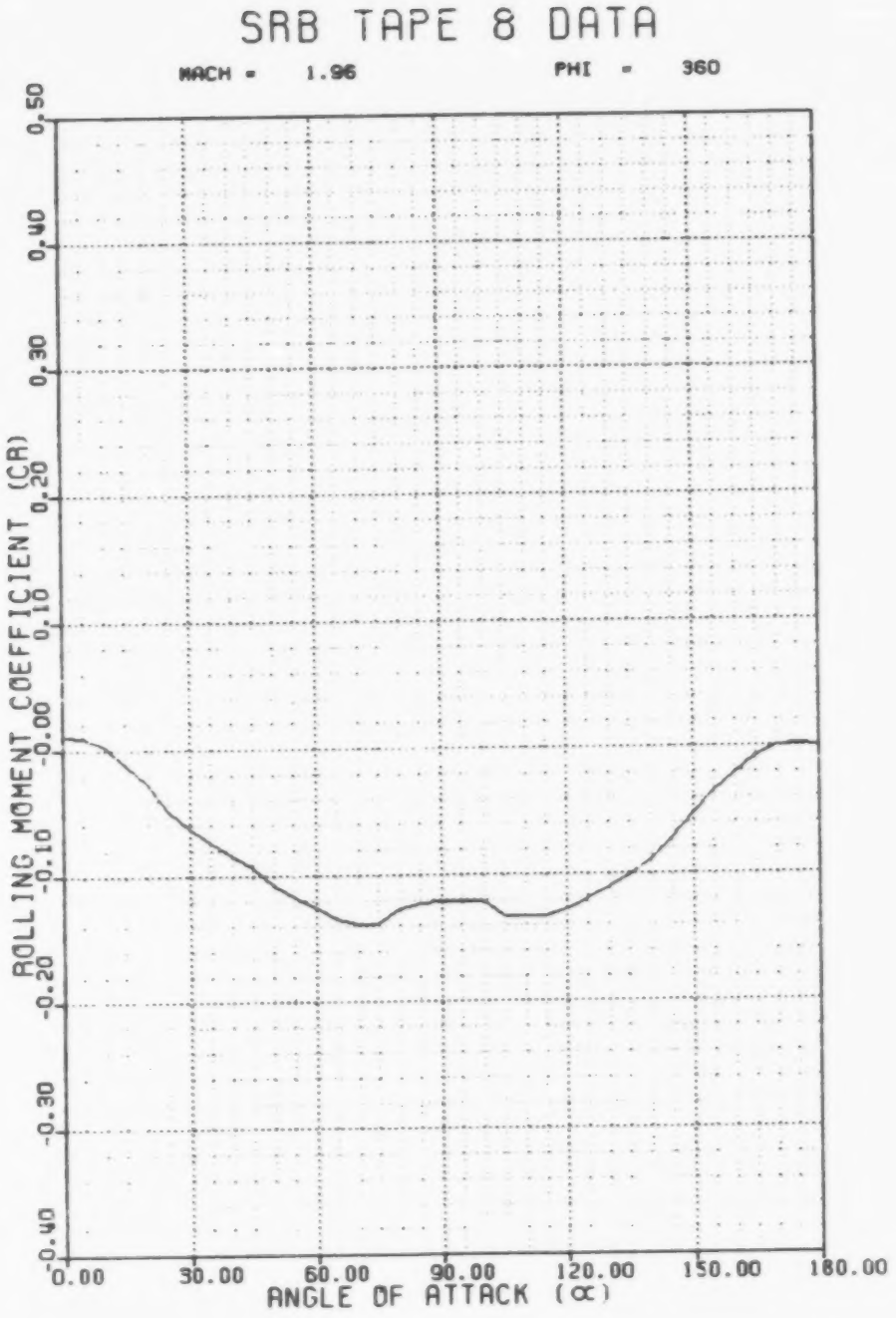
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 1.96
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
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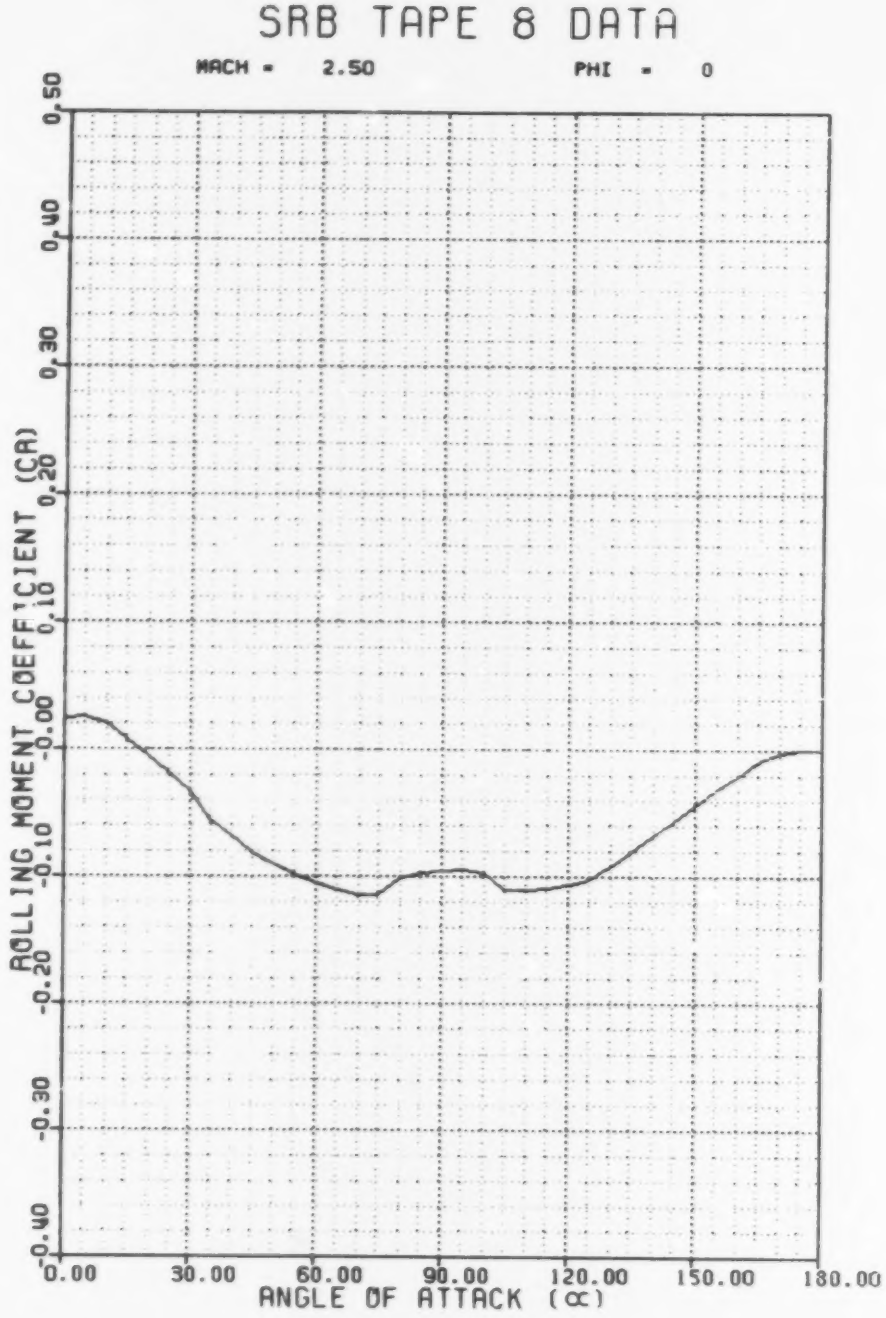
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 0
ROLLING MOMENT COEFFICIENT (CA)
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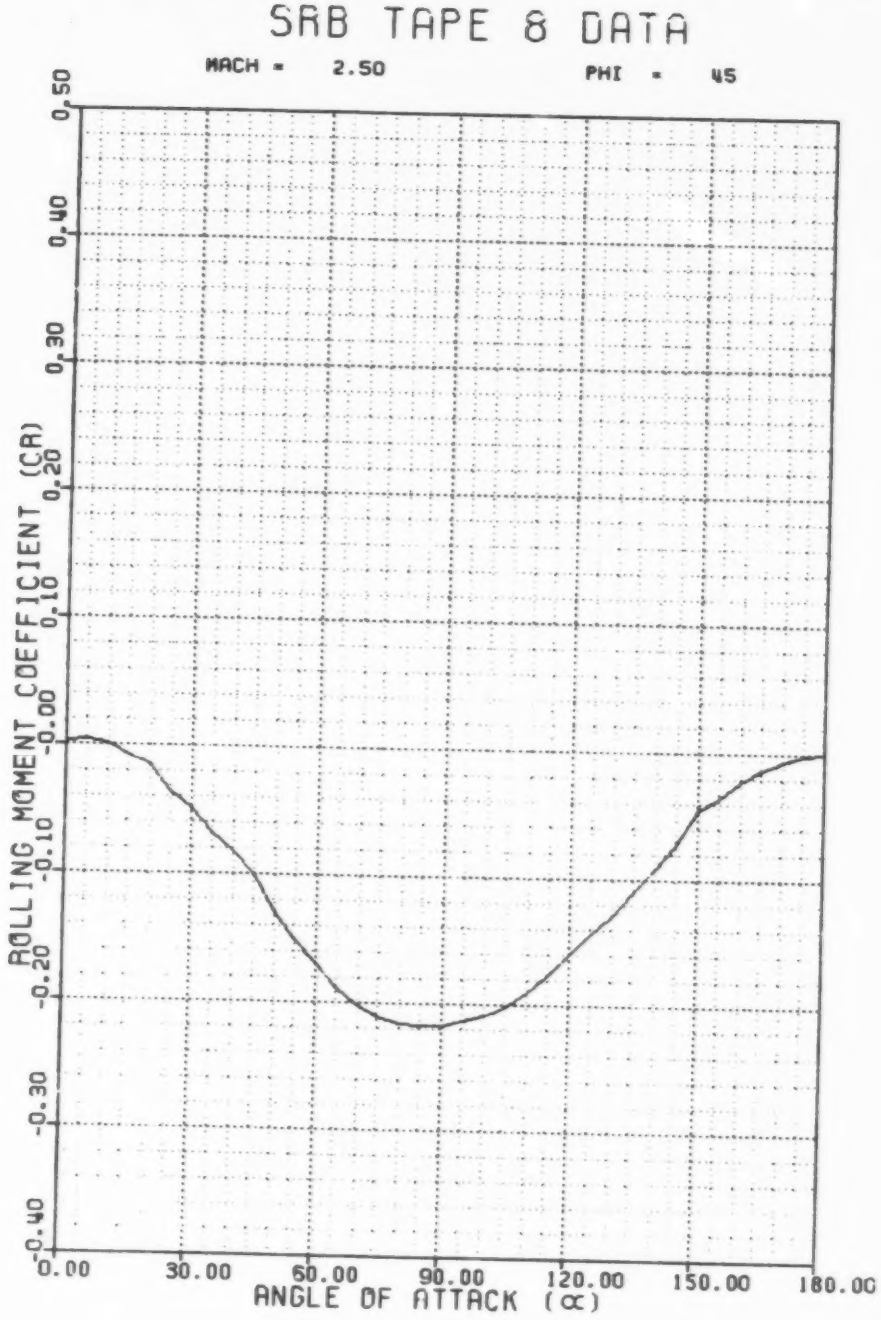
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-838


SRB TAPE & DATA
MACH = 2.50
PHI = 45
ROLLING MOMENT COEFFICIENT (CR)
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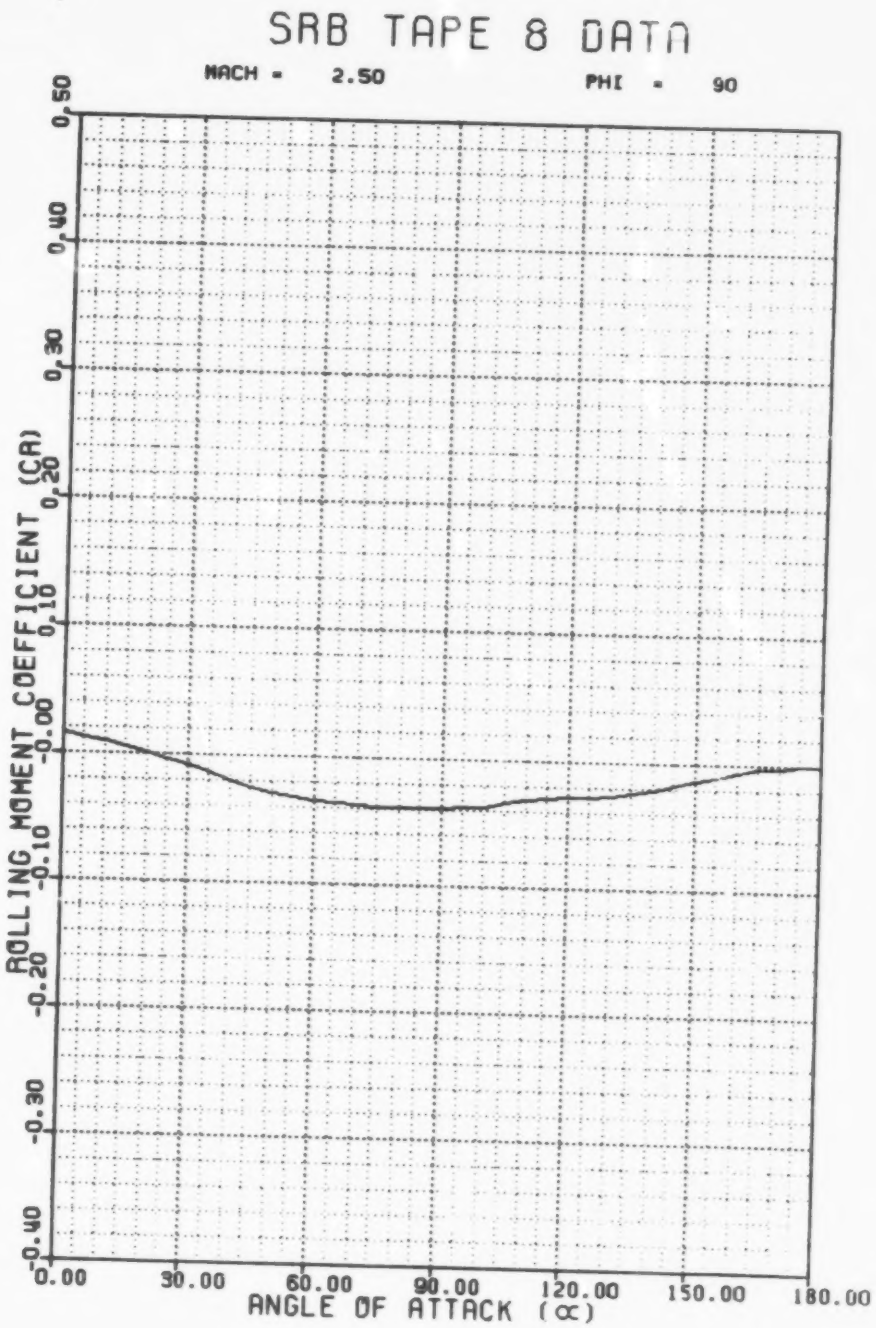
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-839


SRB TAPE 8 DATA
MACH = 2.50
PHI = 90
ROLLING MOMENT COEFFICIENT (CA)
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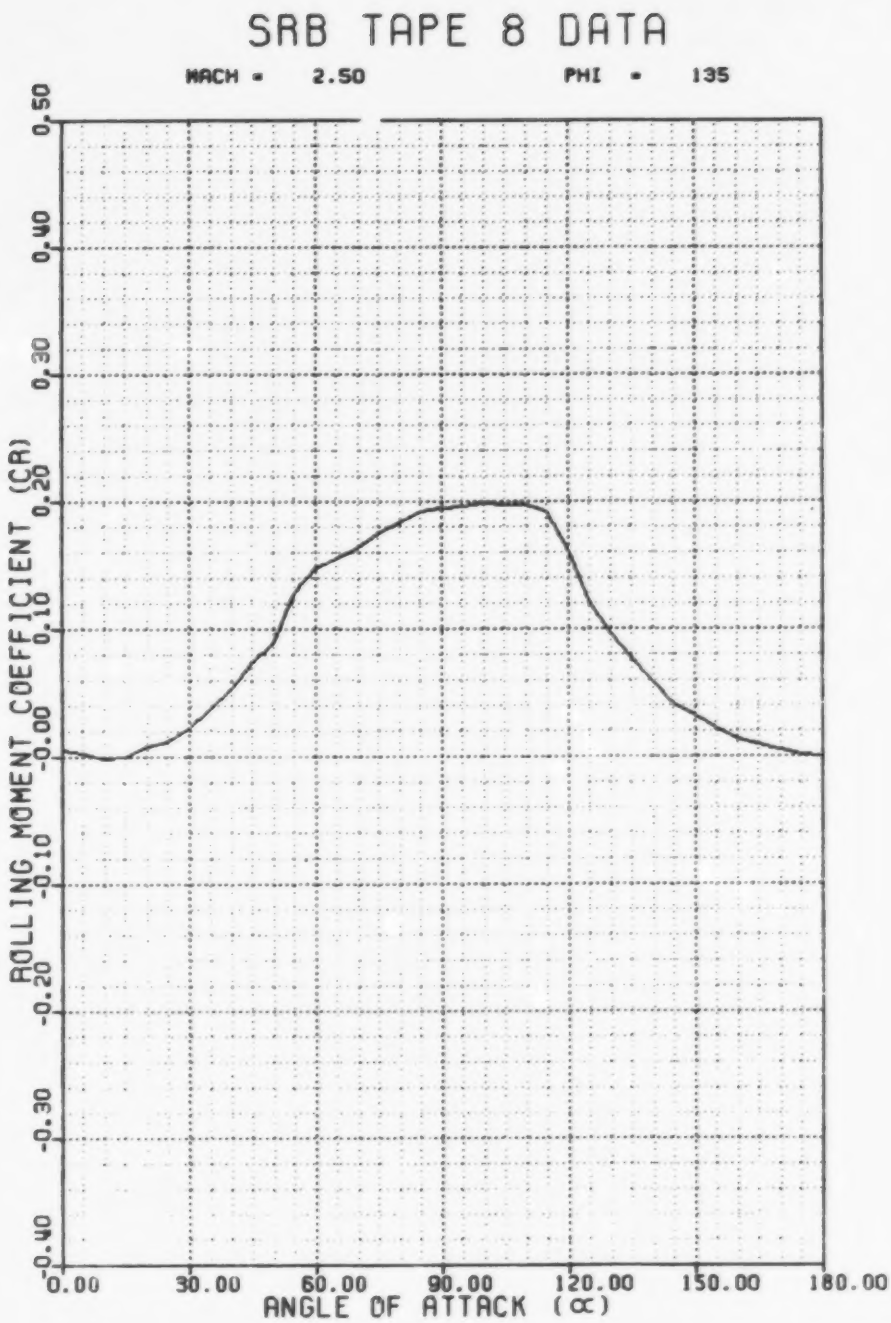
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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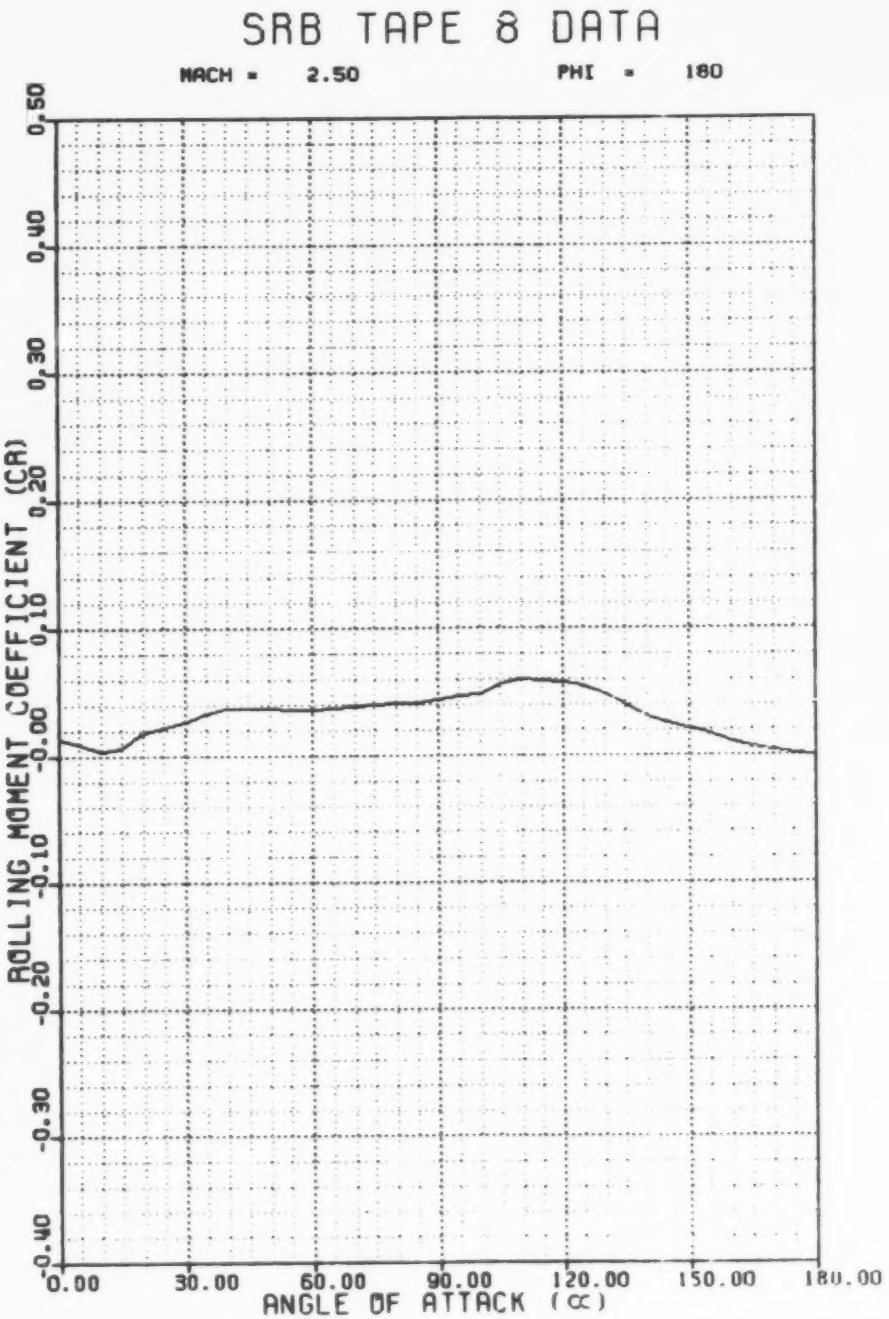
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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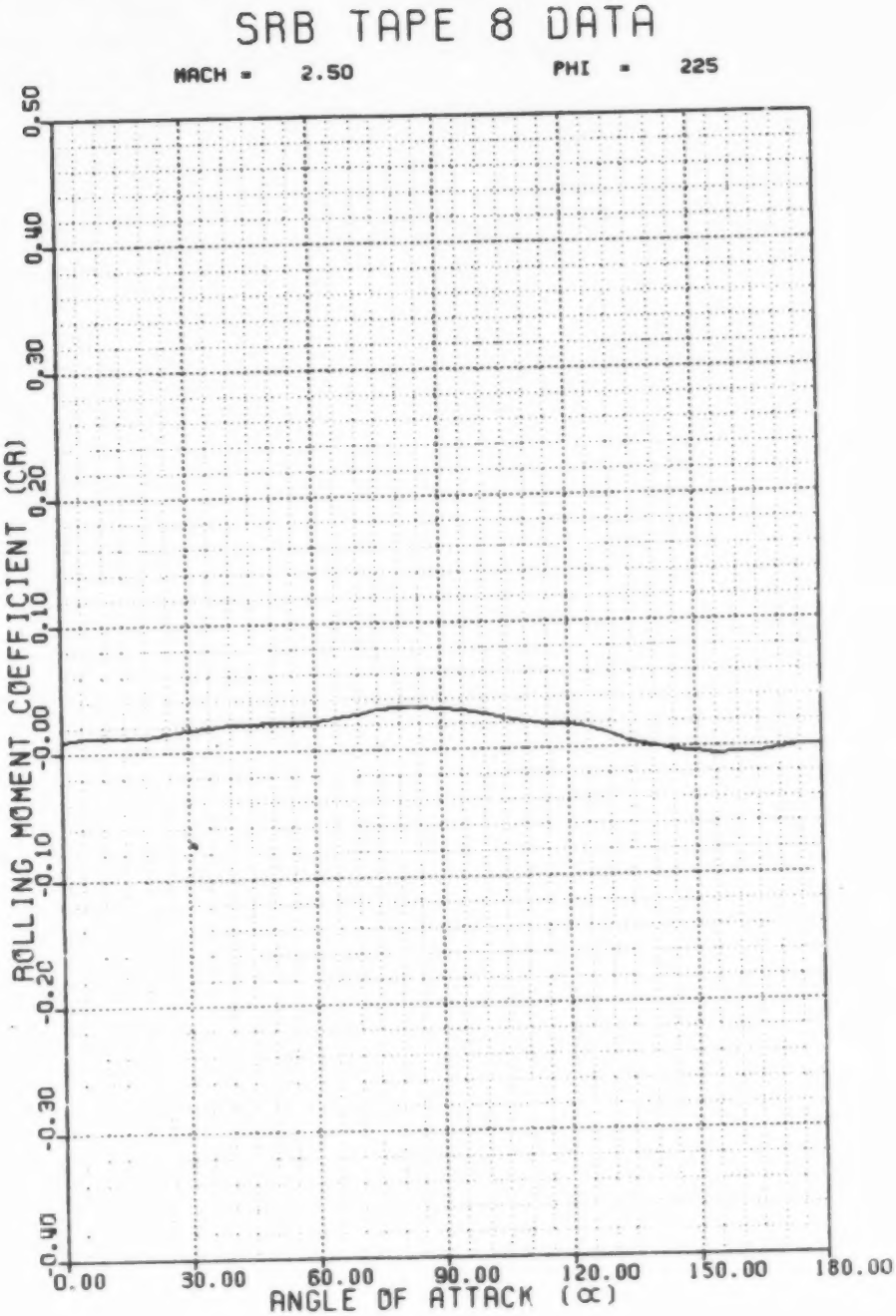
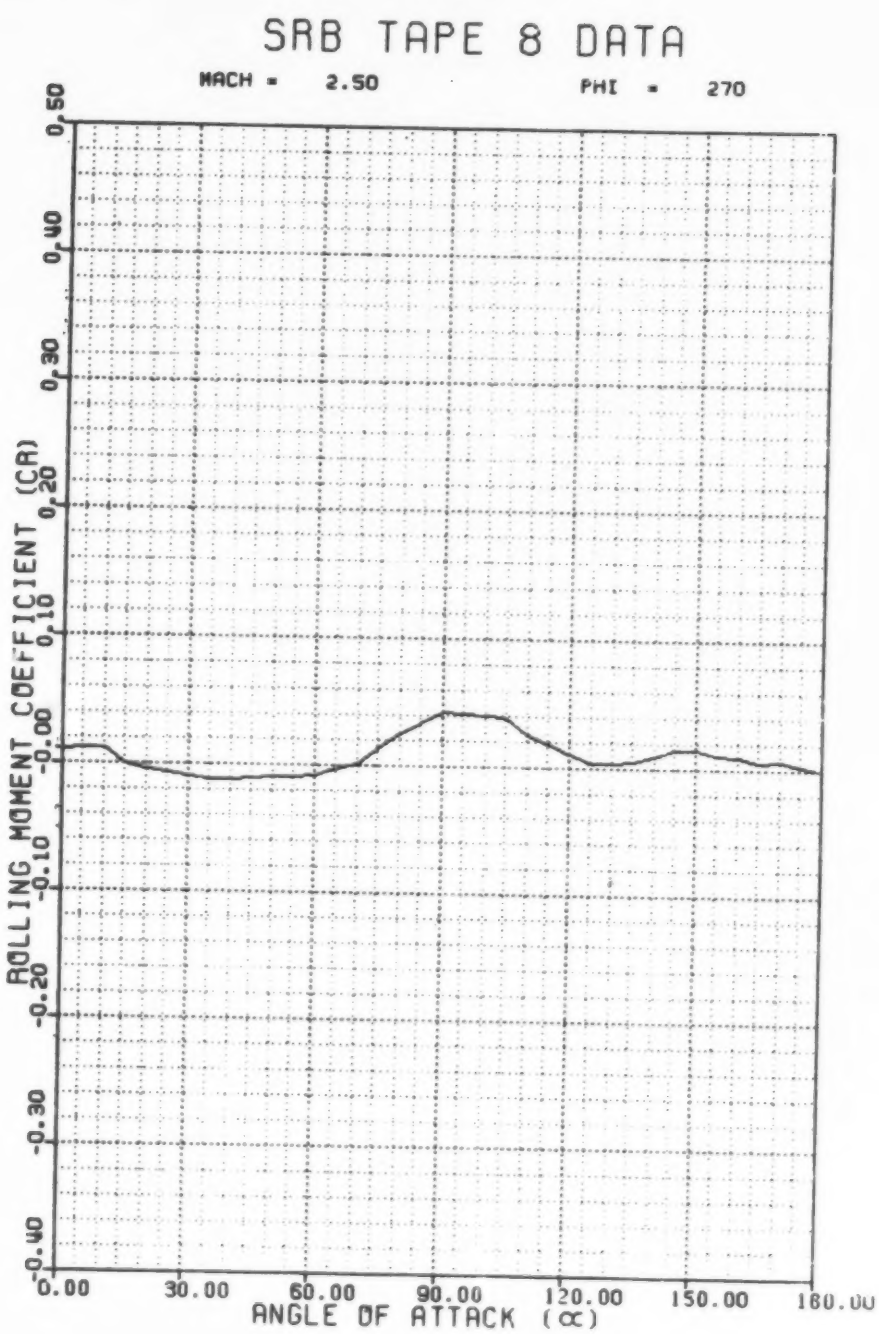
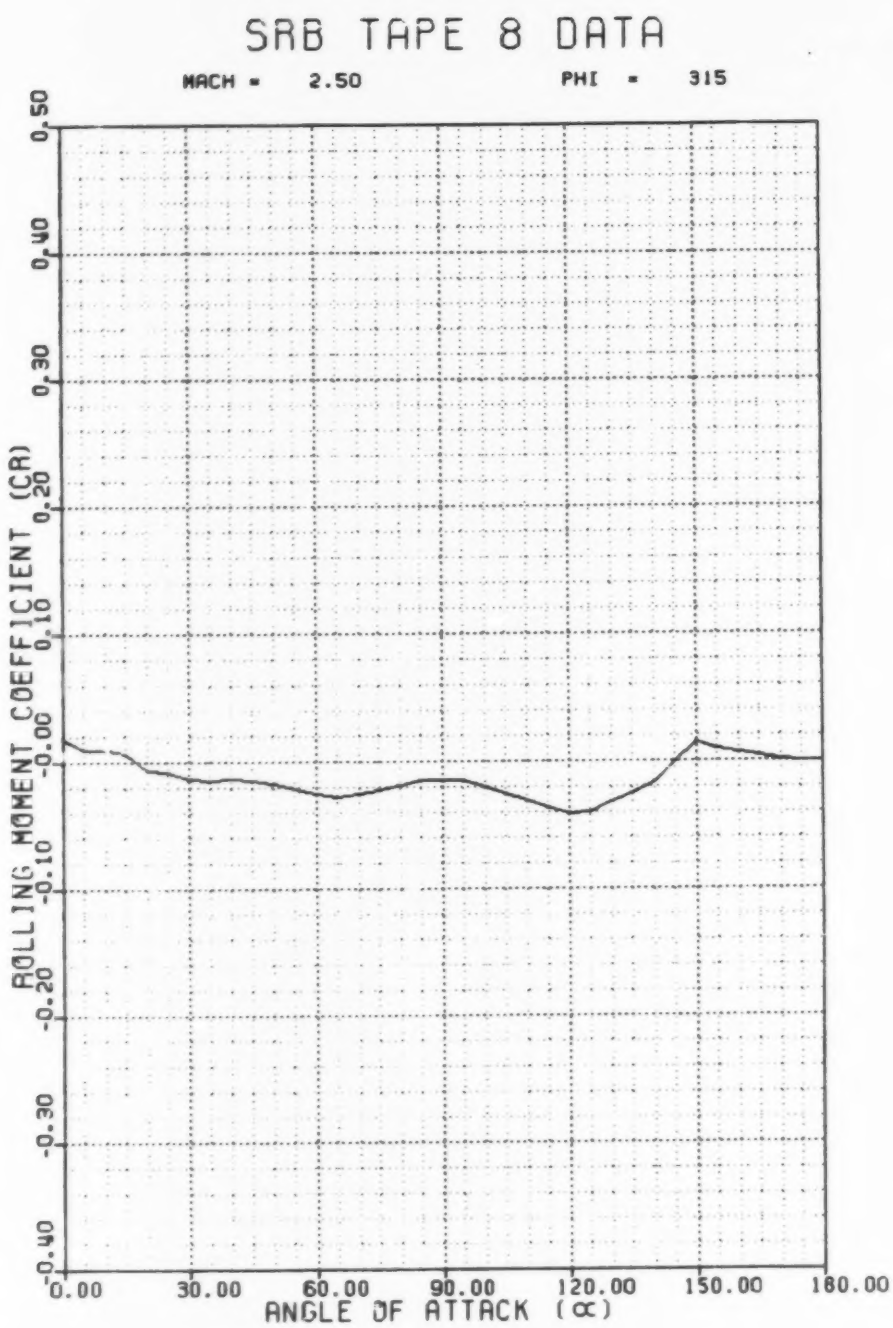
0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 270
ROLLING MOMENT COEFFICIENT (CR)
0.50
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 2.50
PHI = 315
ROLLING MOMENT COEFFICIENT (CR)
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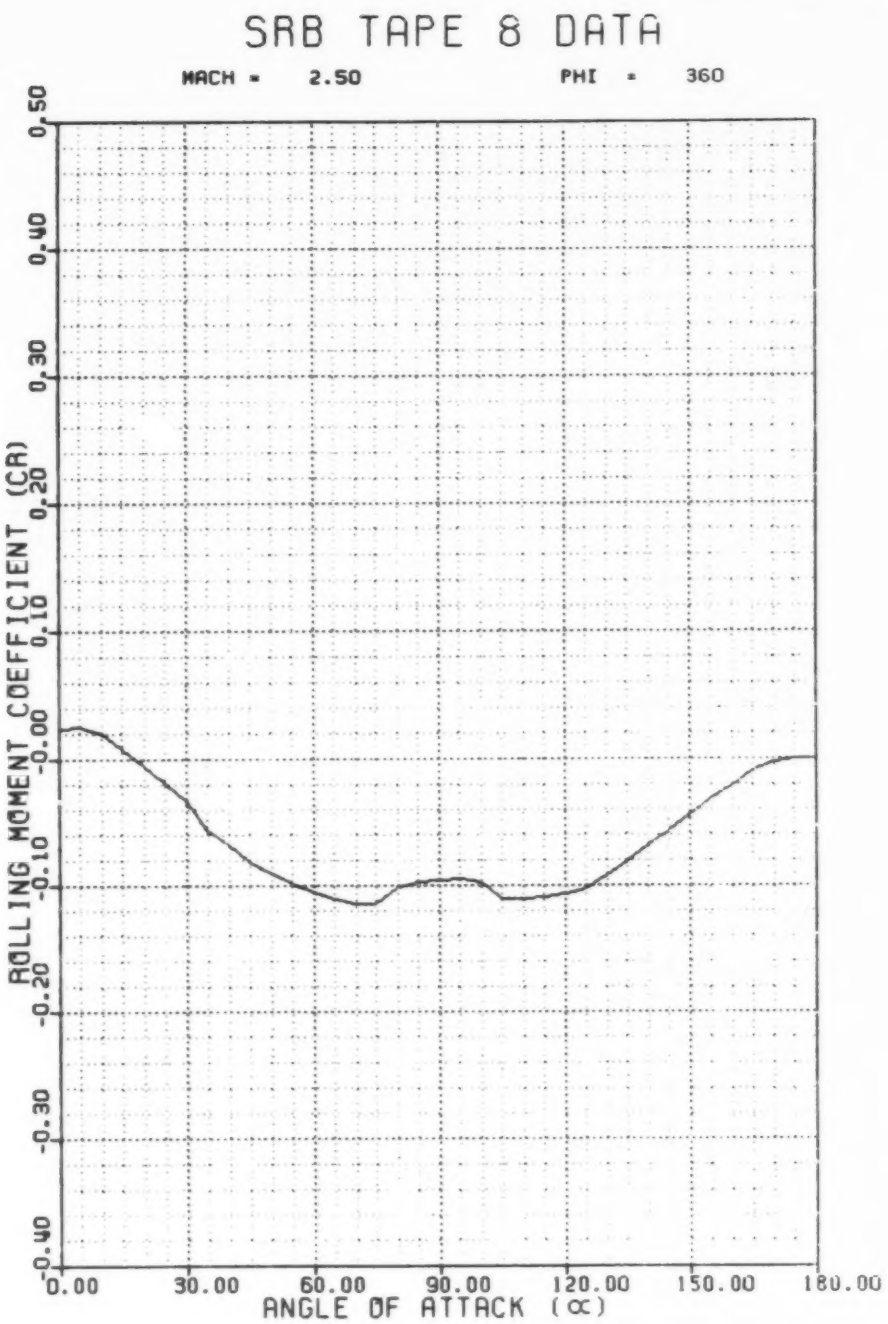
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE & DATA
MACH = 2.50
PHI = 360
ROLLING MOMENT COEFFICIENT (CR)
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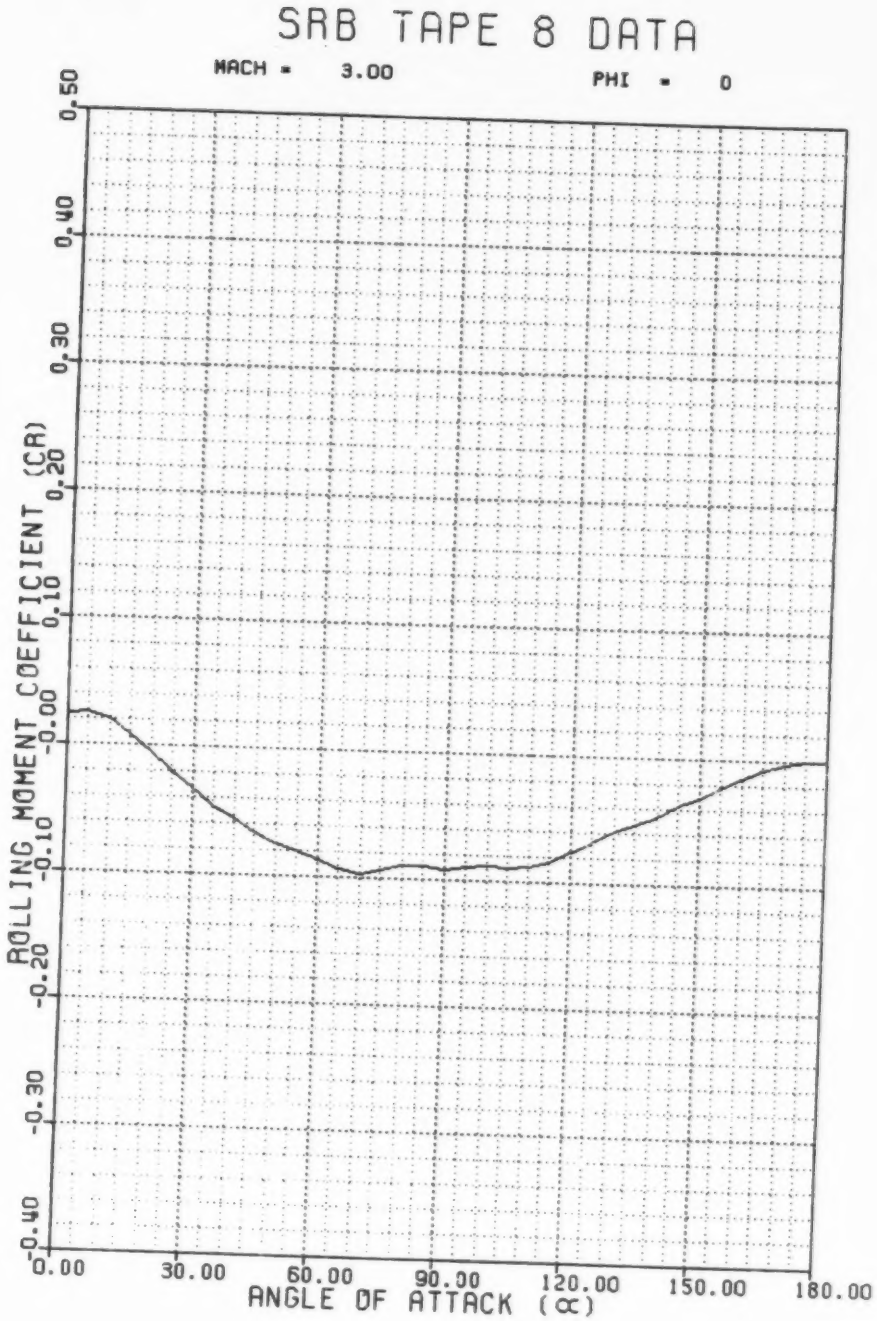
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 0
ROLLING MOMENT COEFFICIENT (CR)
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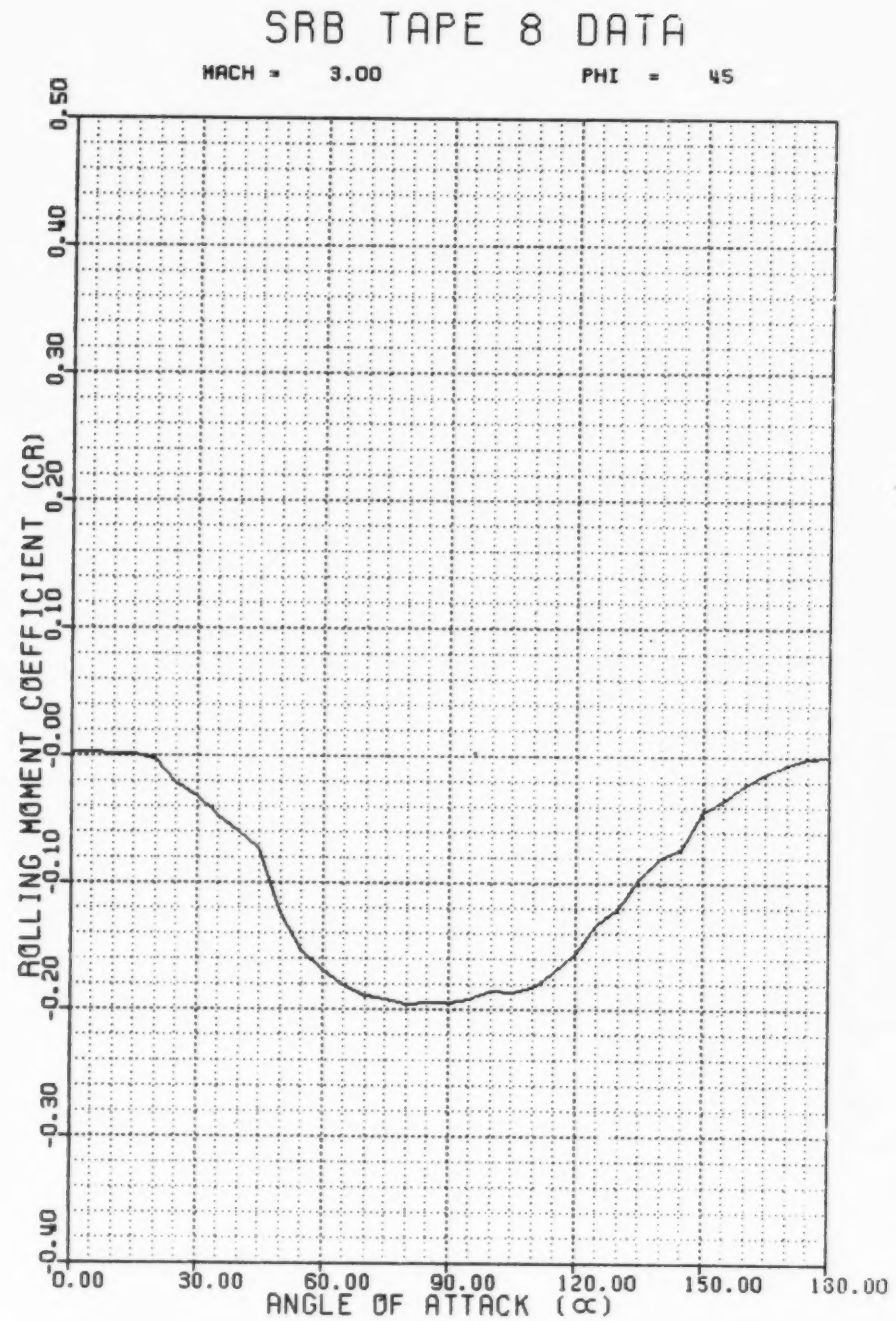
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 45
ROLLING MOMENT COEFFICIENT (CR)
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0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
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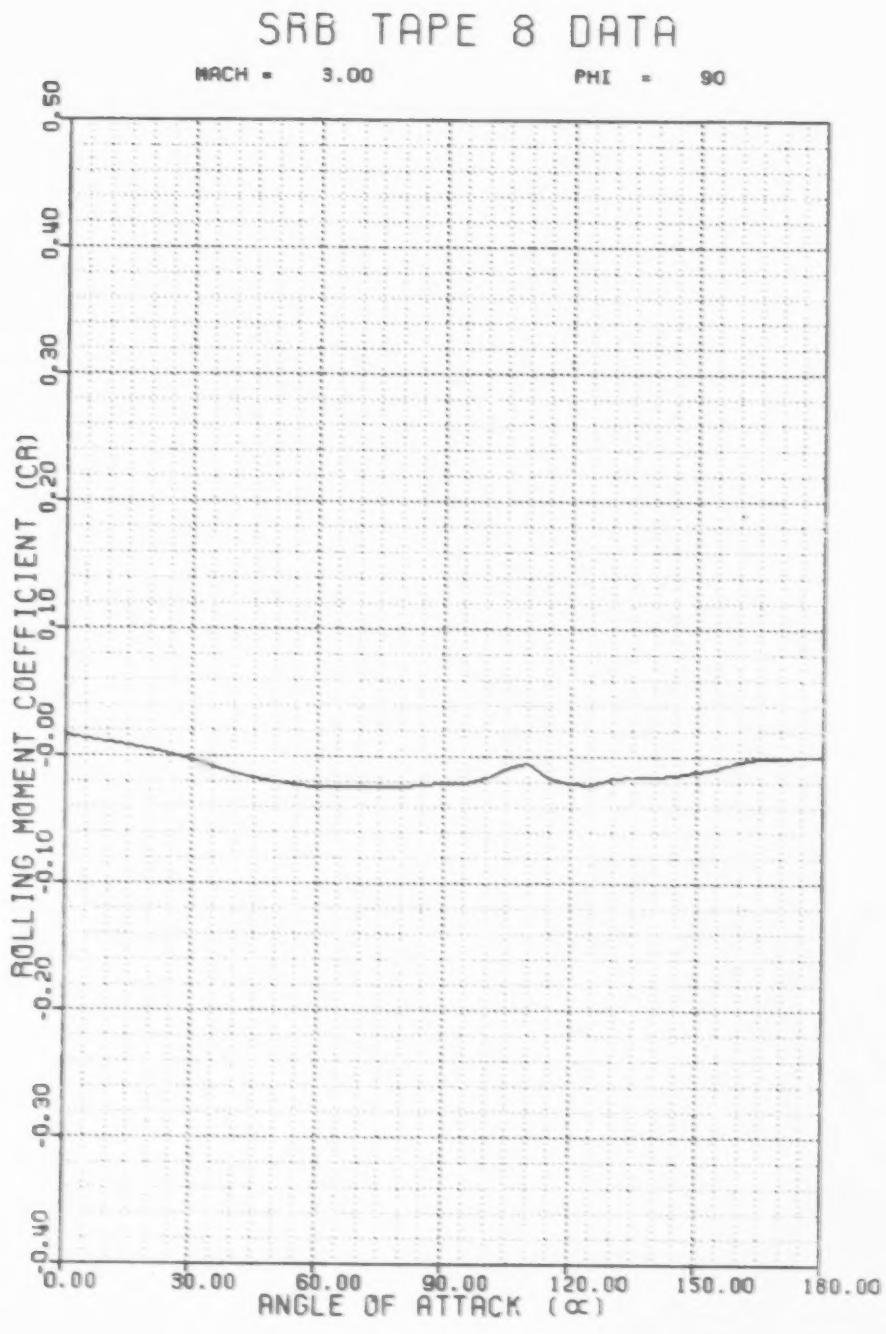
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 90
ROLLING MOMENT COEFFICIENT (CR)
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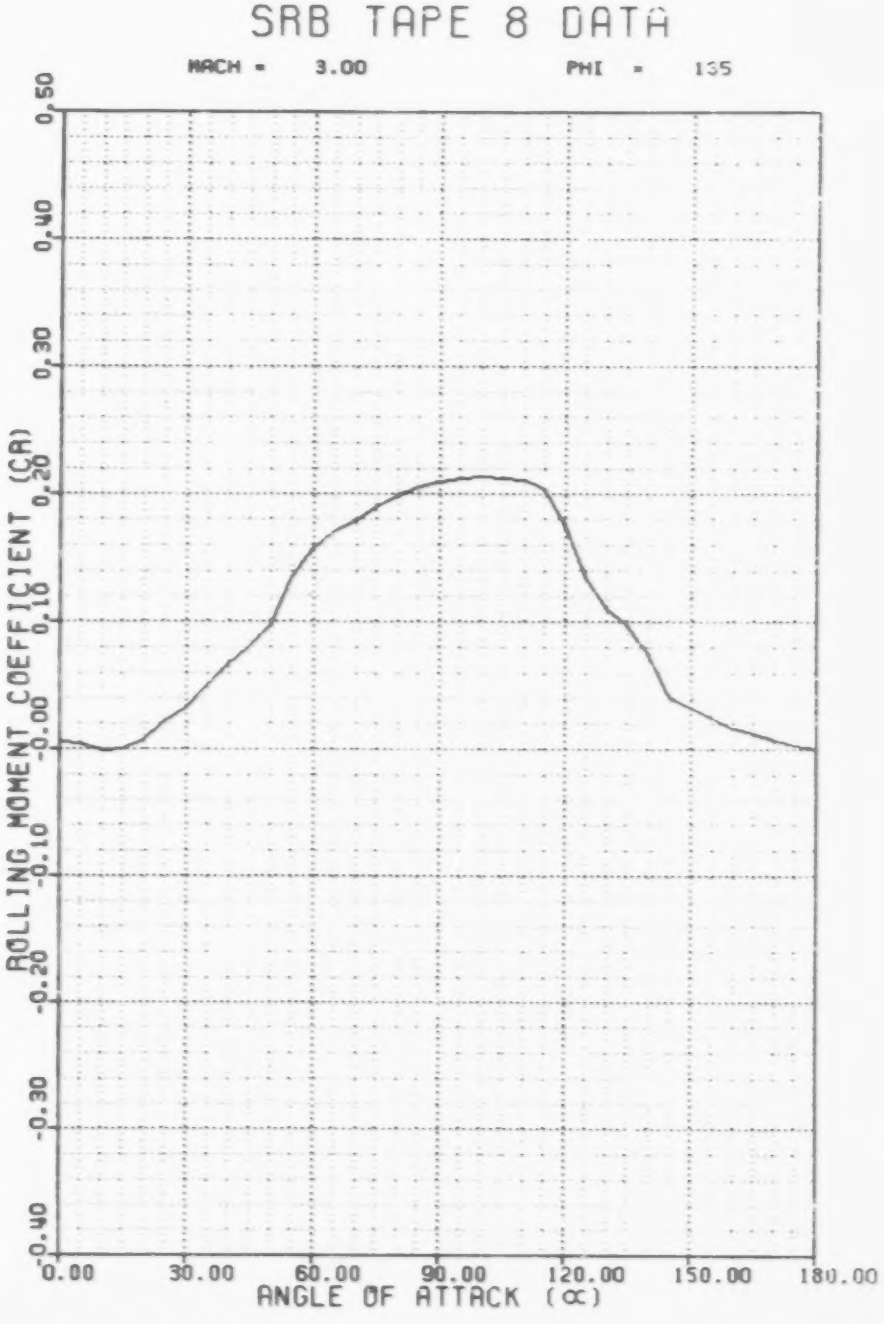
0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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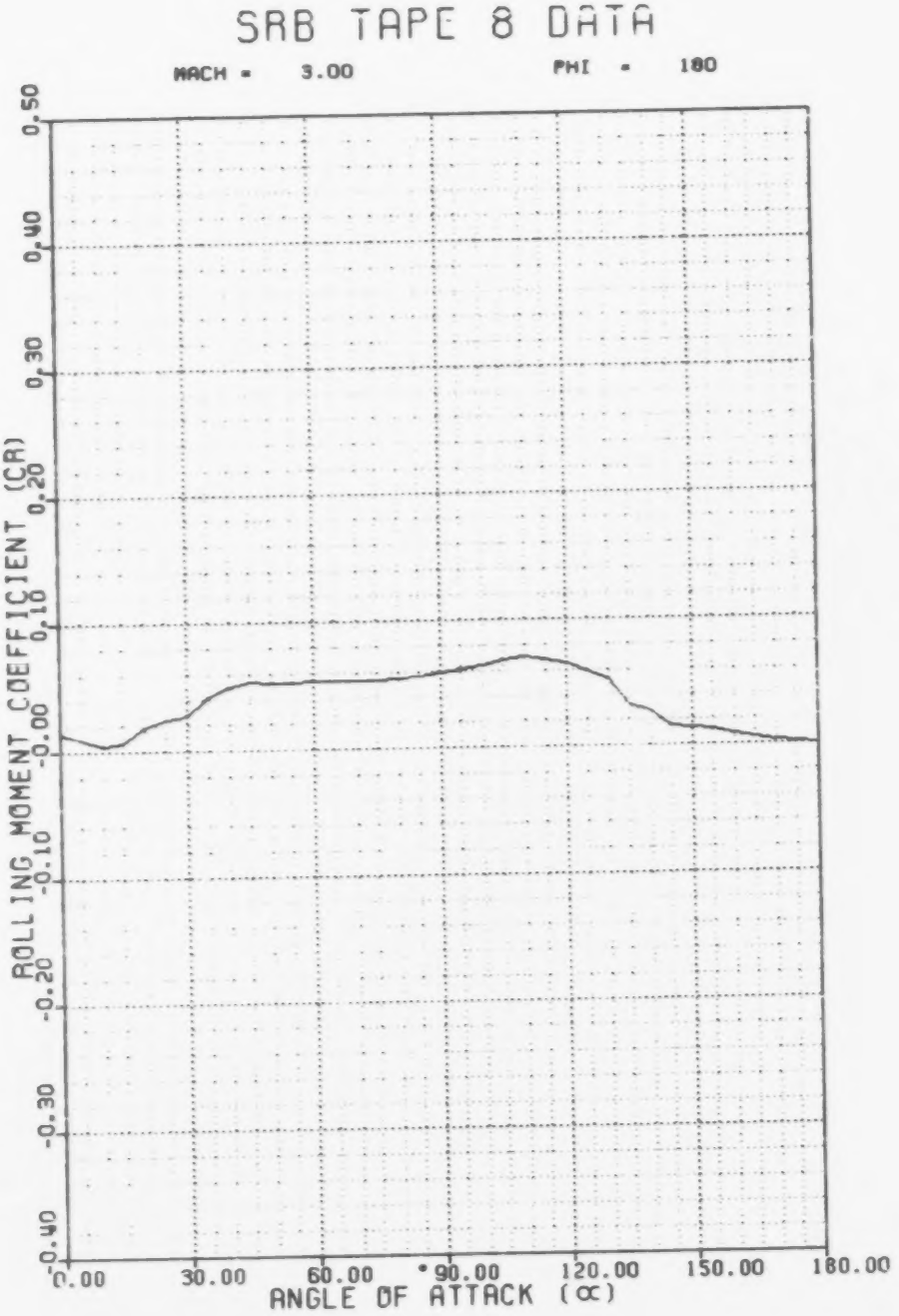
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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0.40
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
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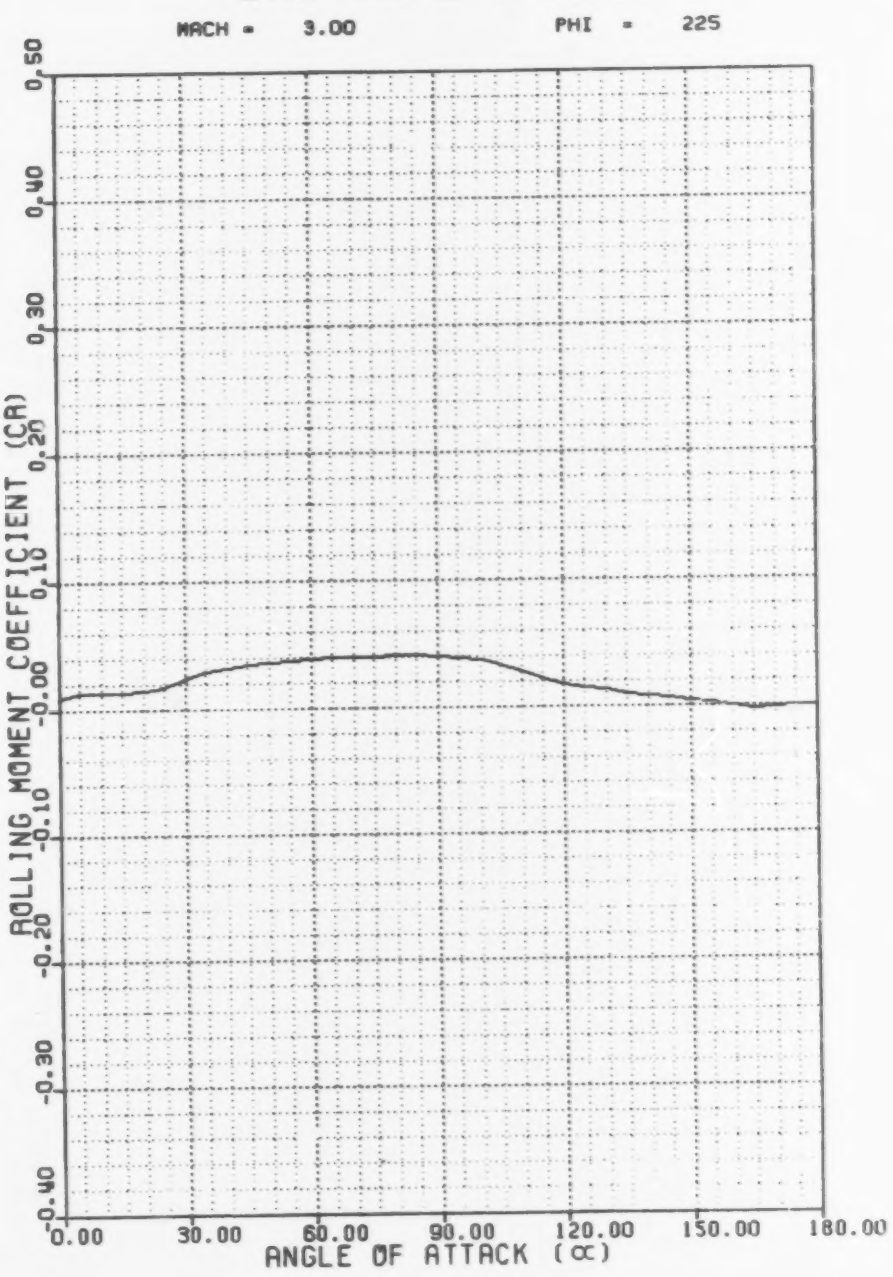
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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0.40
0.30
0.20
0.10
0.00
-0.10
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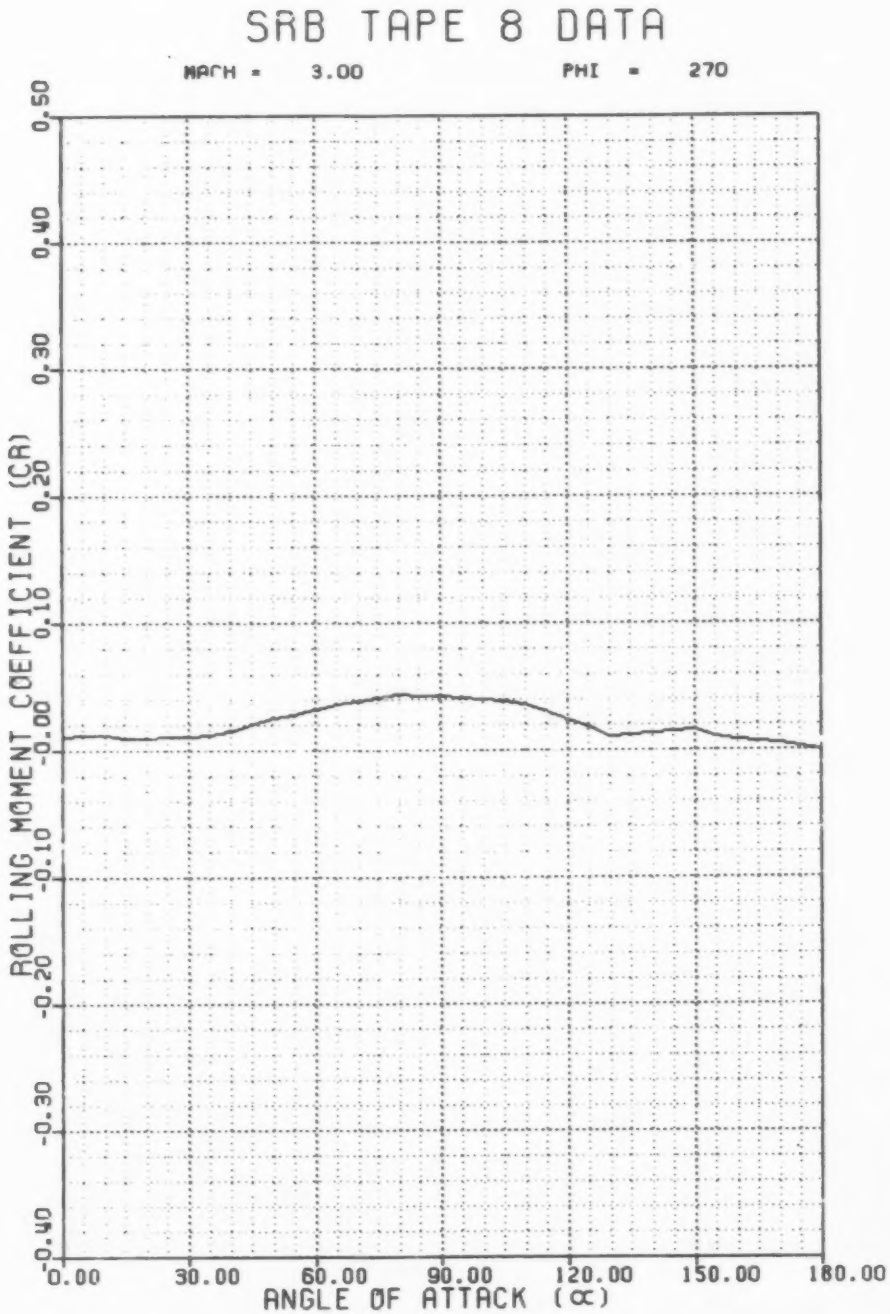
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 270
ROLLING MOMENT COEFFICIENT (CR)
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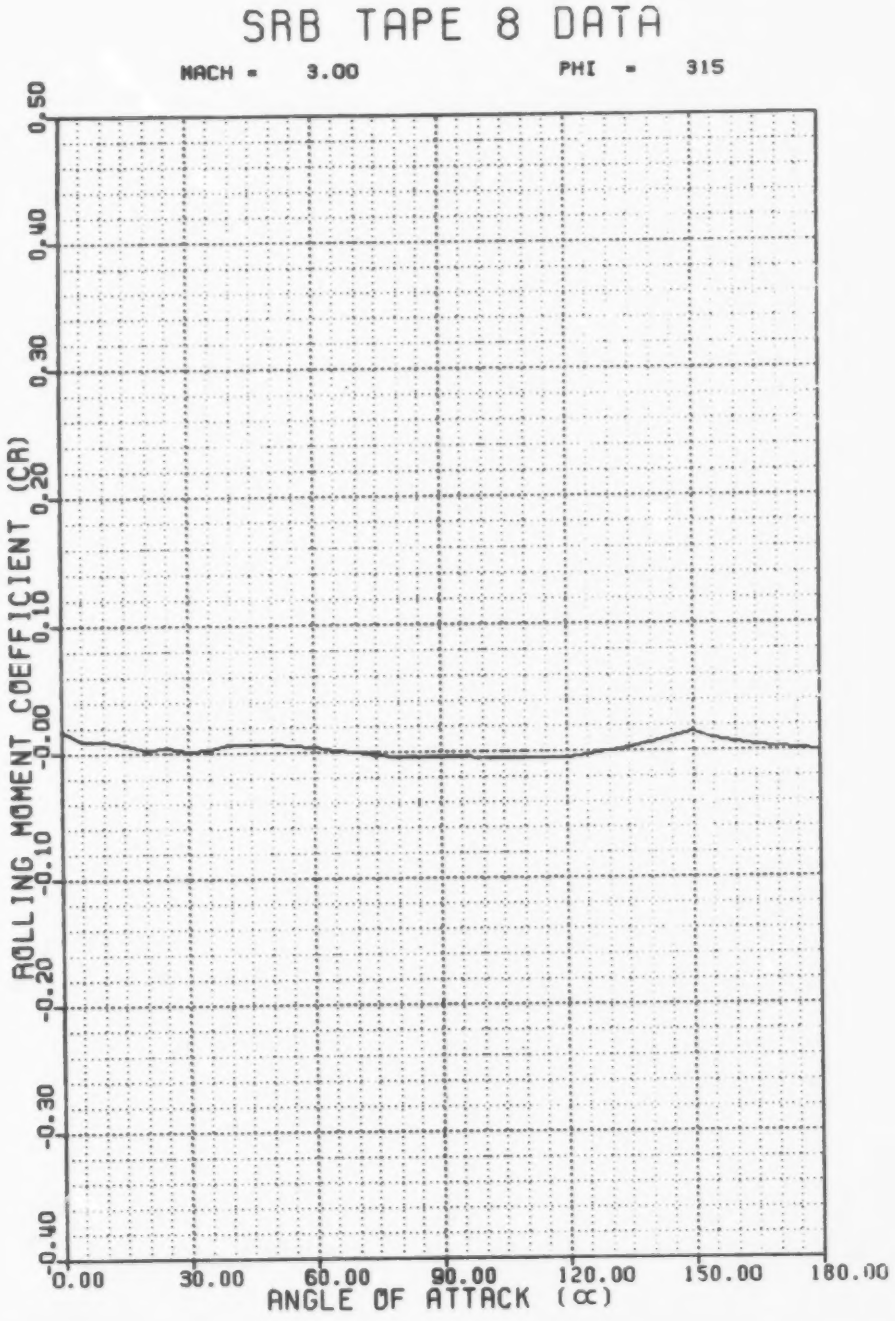
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.00
PHI = 315
ROLLING MOMENT COEFFICIENT (CR)
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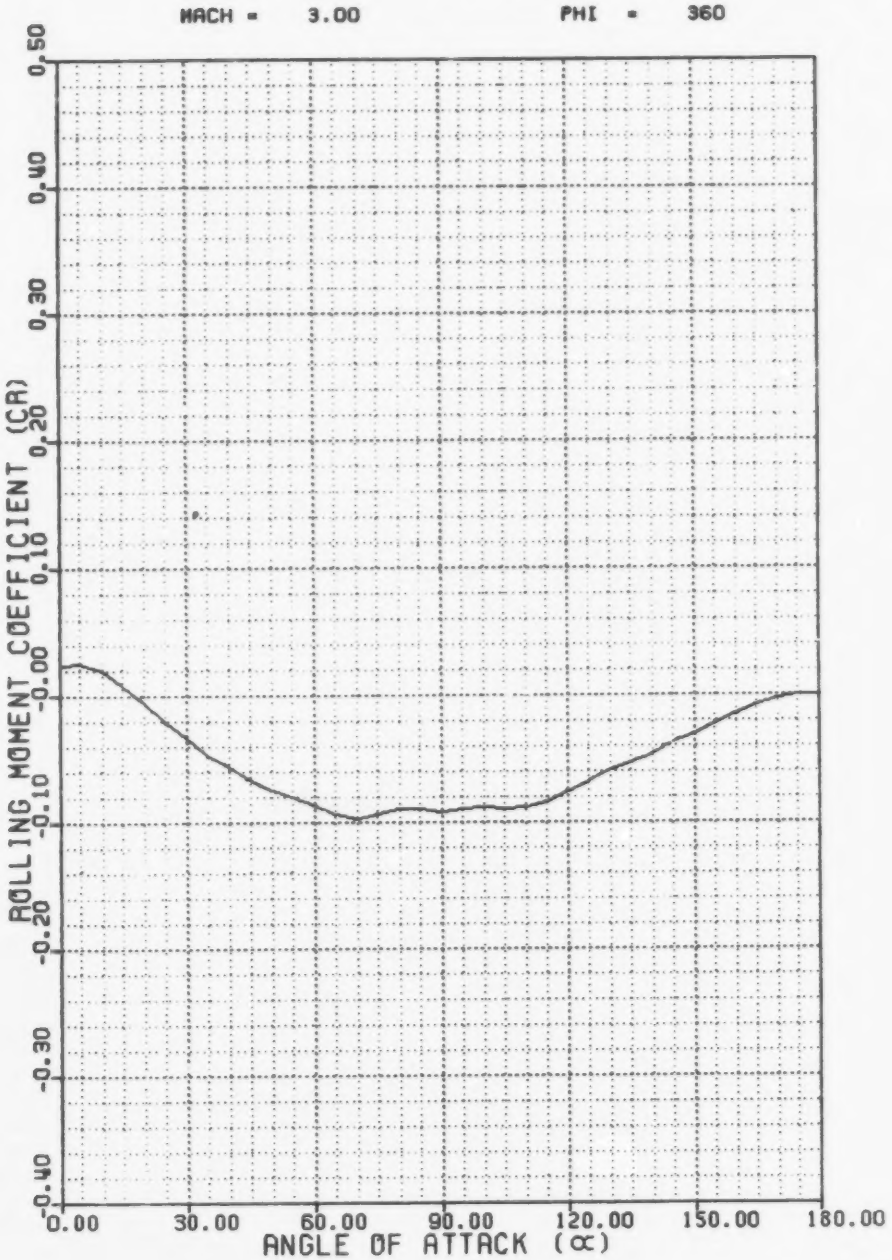
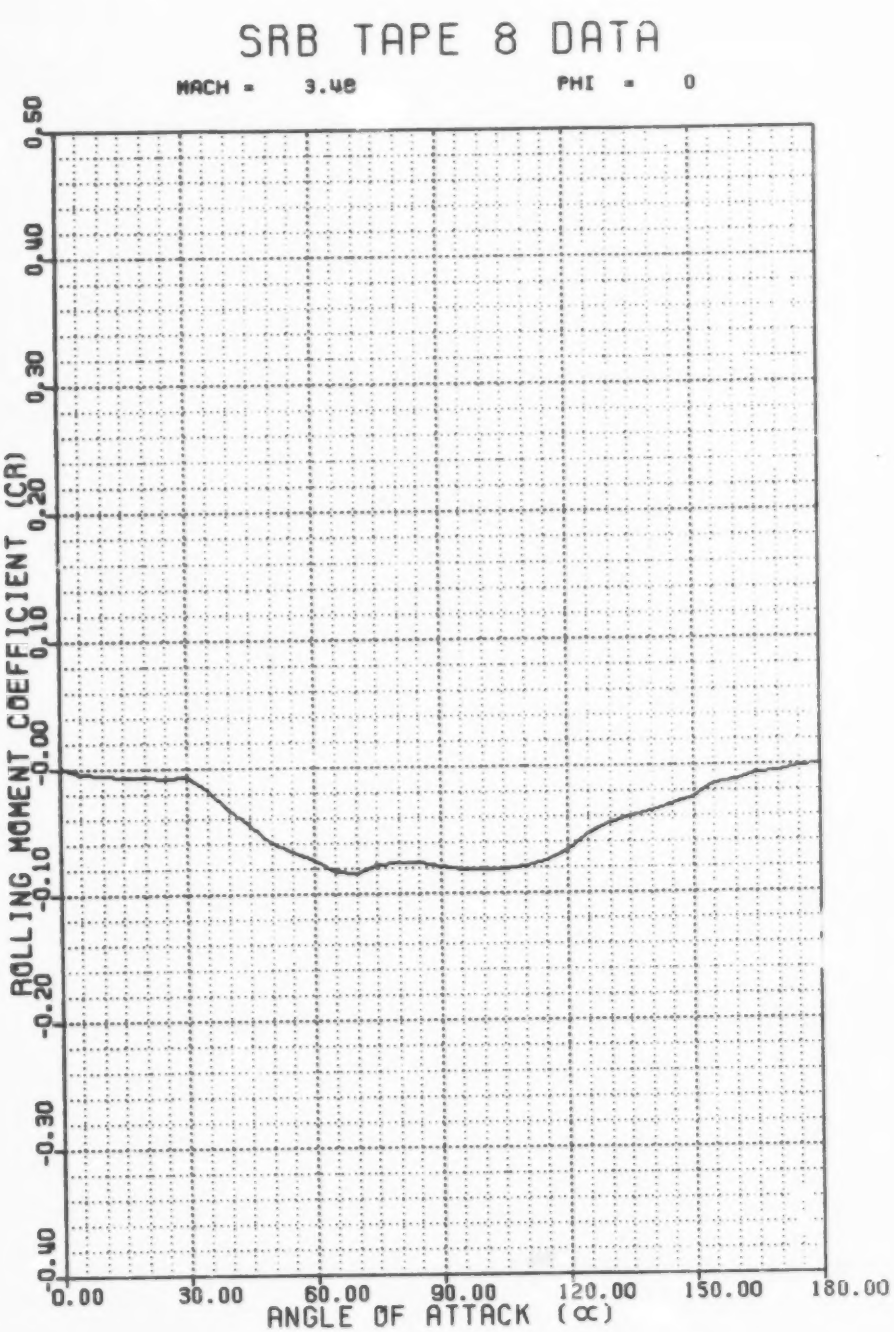
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

SRB TAPE 8 DATA

MACH = 3.00 PHI = 360




SRB TAPE 8 DATA
MACH = 3.48
PHI = 0
ROLLING MOMENT COEFFICIENT (CR)
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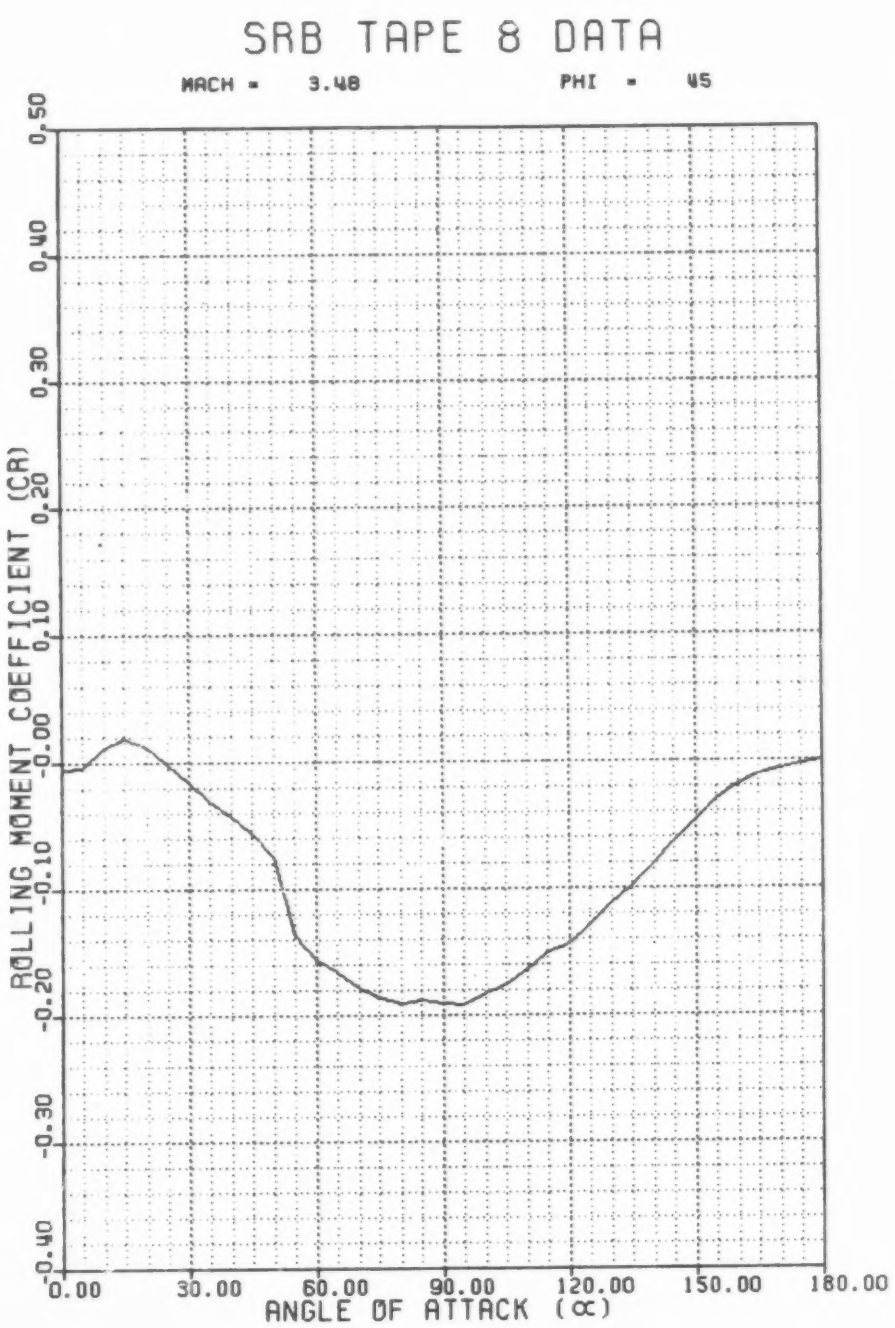
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

B-856


SRB TAPE 8 DATA
MACH = 3.48
PHI = 45
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
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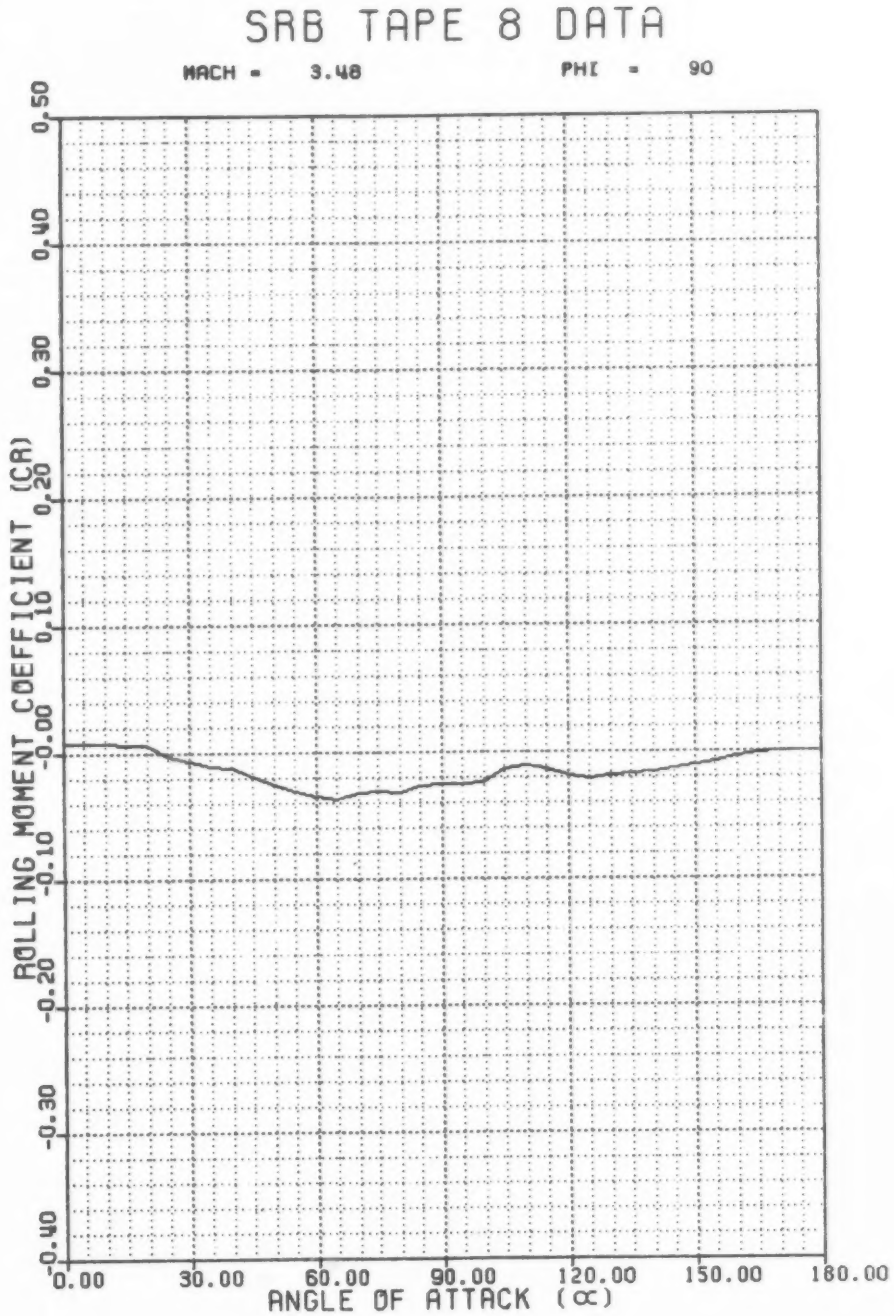
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 90
ROLLING MOMENT COEFFICIENT (CR)
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0.40
0.30
0.20
0.10
-0.00
-0.10
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-0.30
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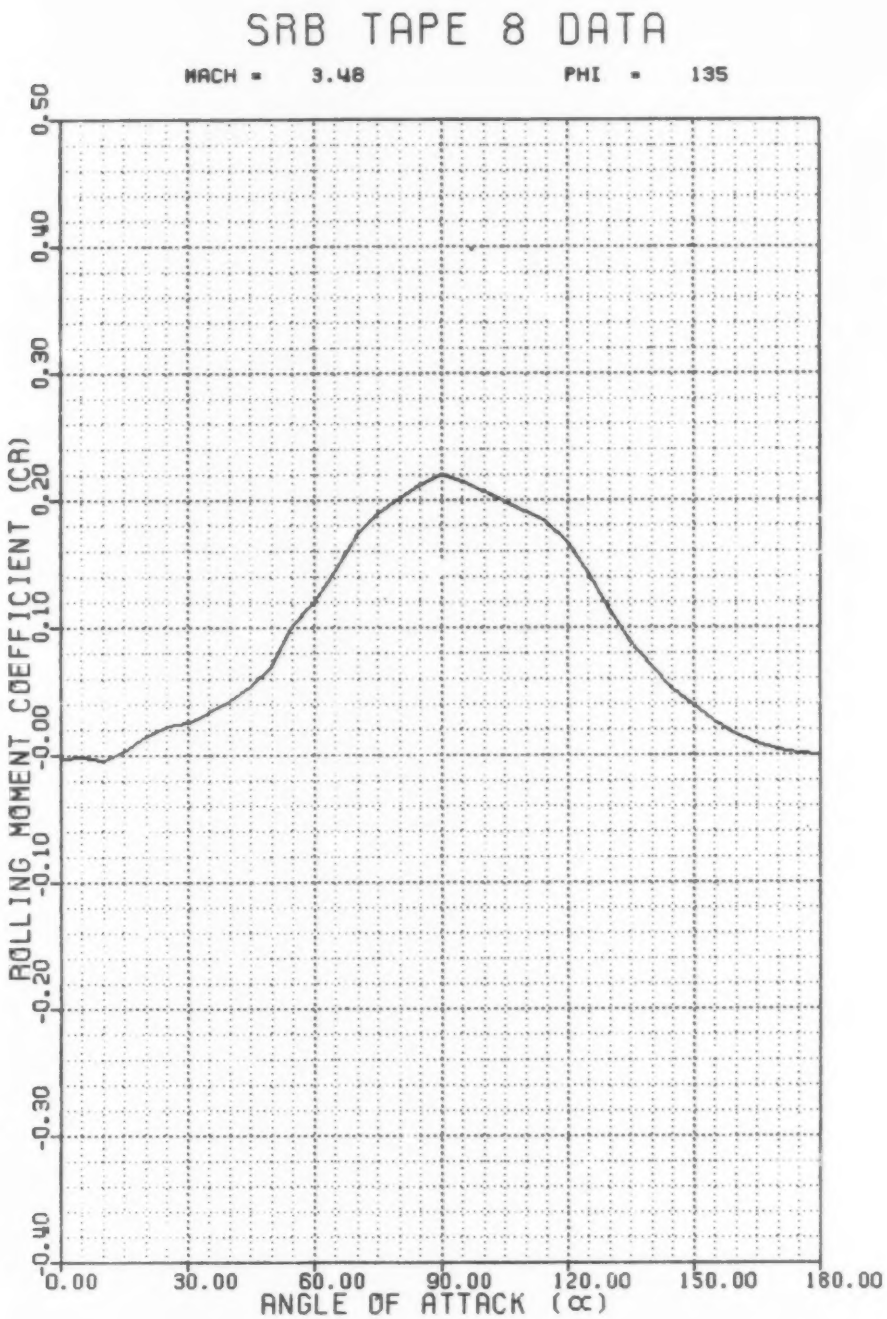
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 135
ROLLING MOMENT COEFFICIENT (CR)
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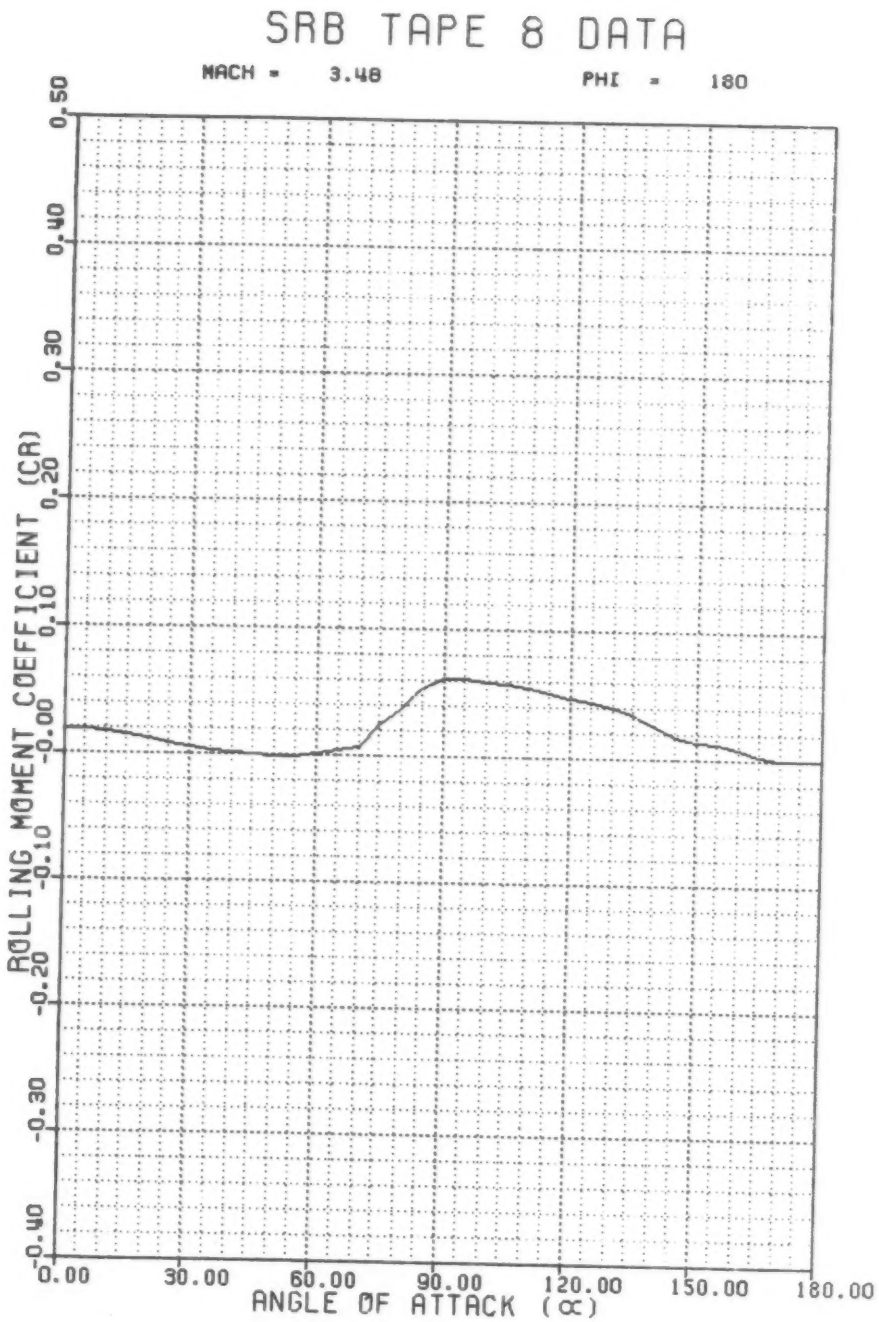
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 180
ROLLING MOMENT COEFFICIENT (CR)
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0.30
0.20
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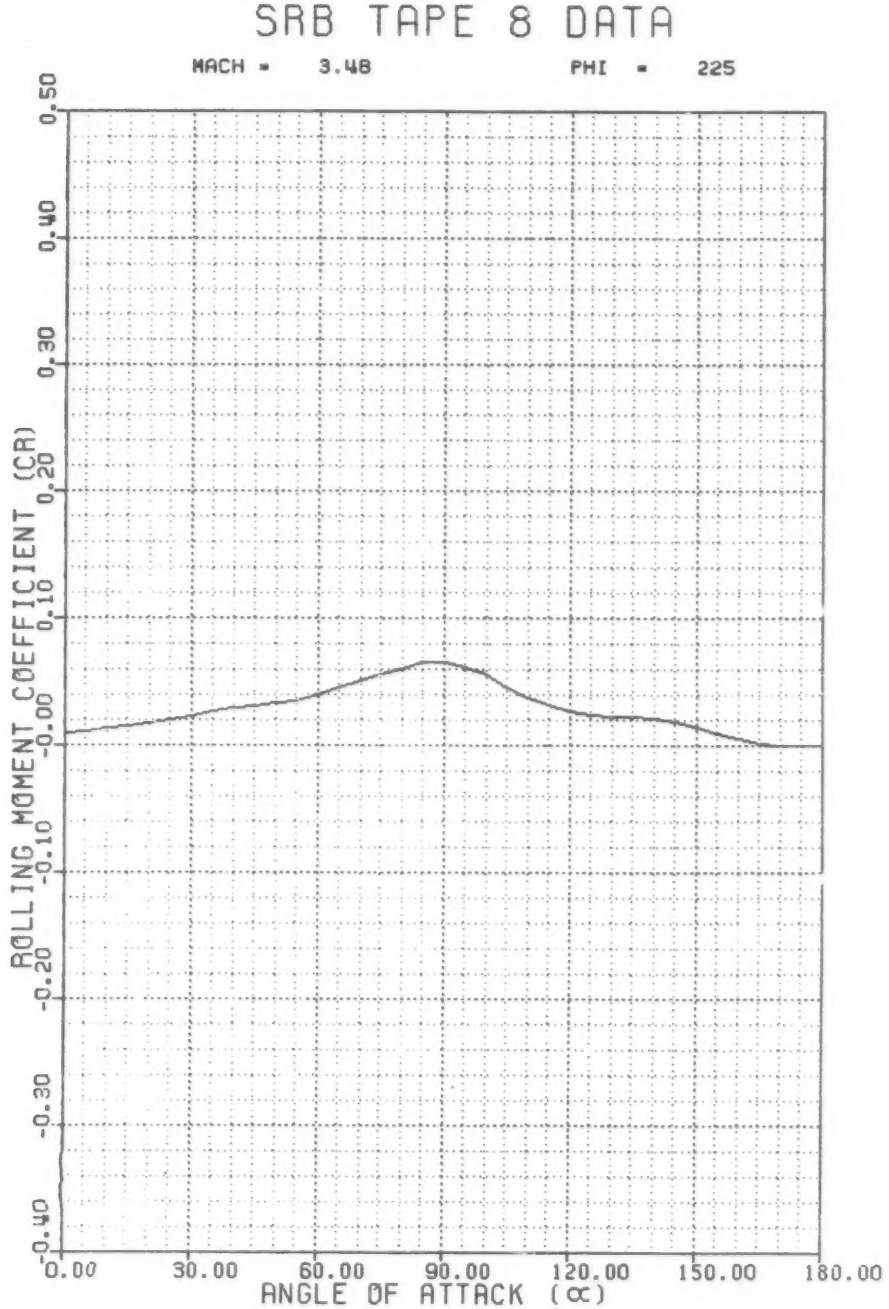
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)


SRB TAPE 8 DATA
MACH = 3.48
PHI = 225
ROLLING MOMENT COEFFICIENT (CR)
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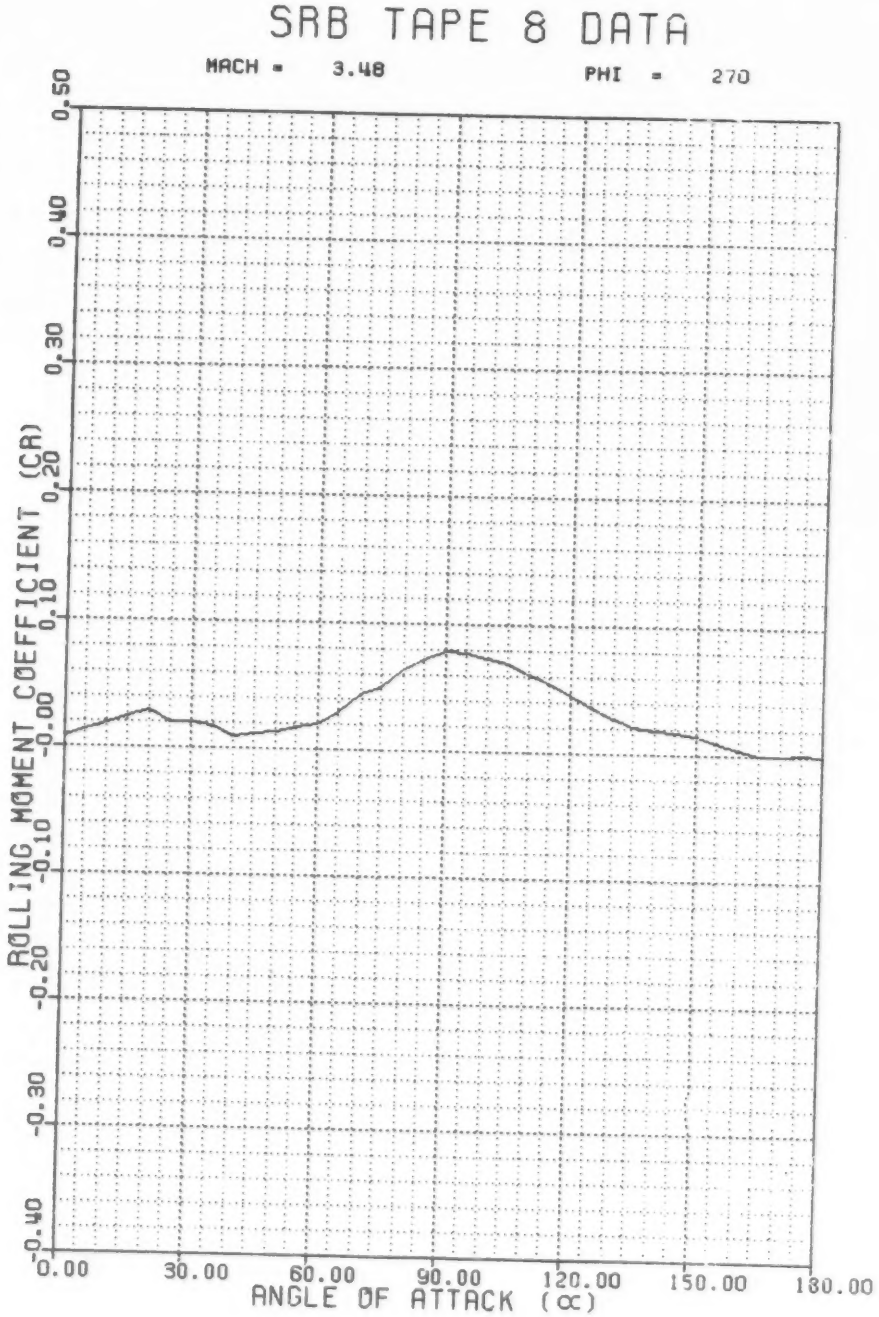
0.40
0.30
0.20
0.10
-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)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0.30
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-0.00
-0.10
-0.20
-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)

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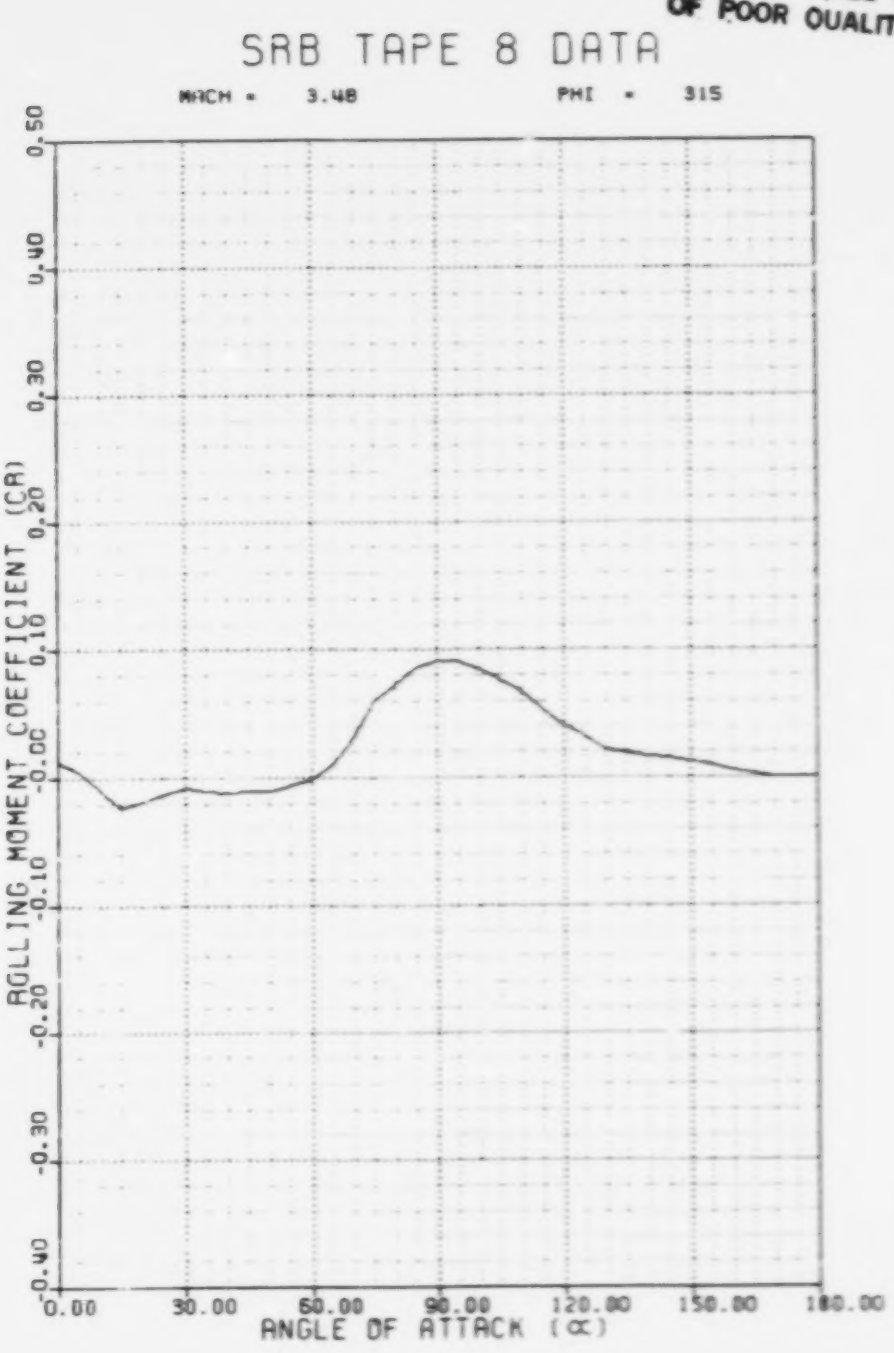
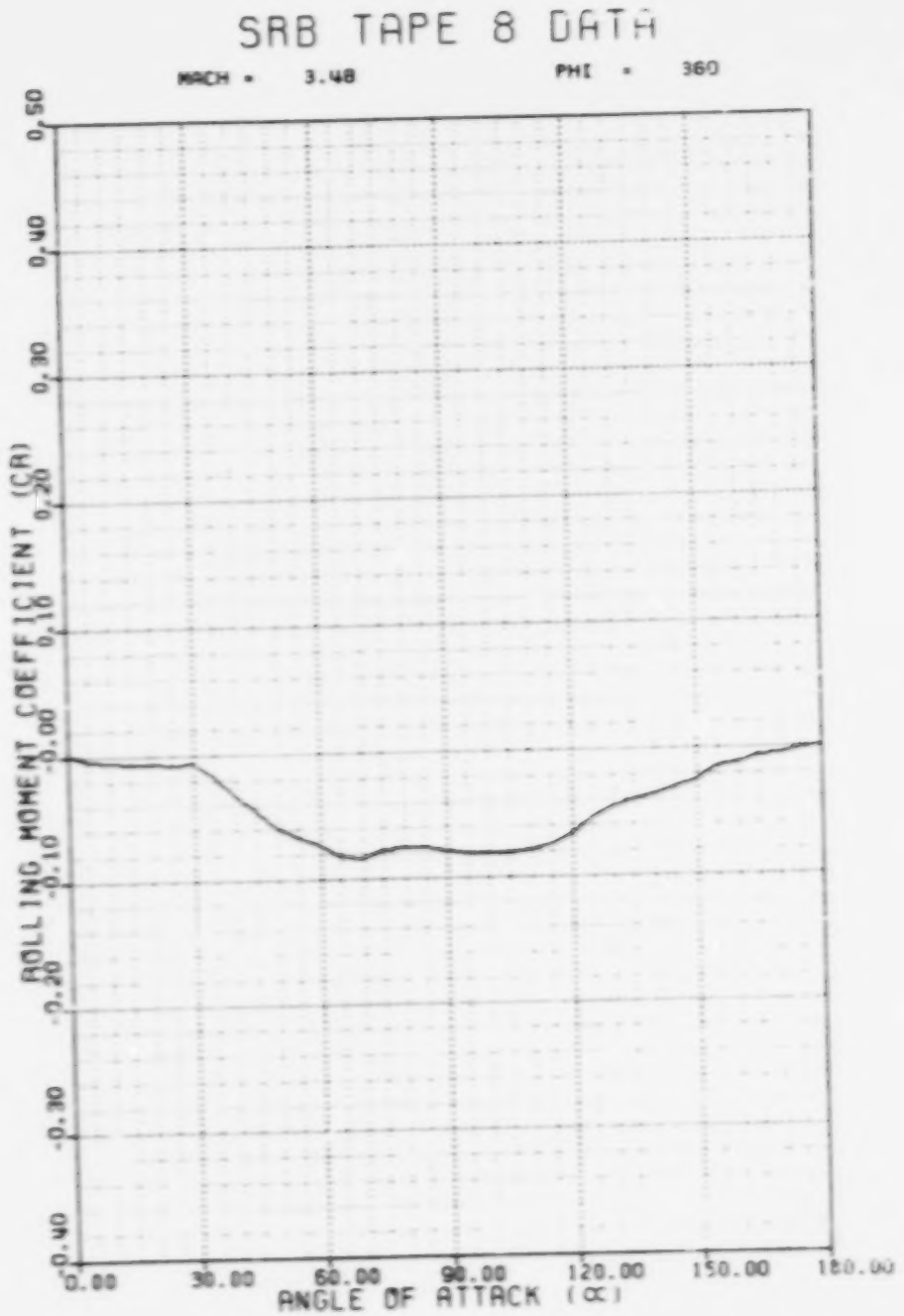
ORIGINAL PAGE IS
OF POOR QUALITY



B-863


SRB TAPE 8 DATA
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PHI = 360
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-0.30
-0.40
0.00
30.00
60.00
90.00
120.00
150.00
180.00
ANGLE OF ATTACK (α)